The Syntax of External Possession: Its Basis in Theta-theory

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I am an idealist. I don't know where I'm going but I'm on the way.'

Carl Sandburg

Abstract

This thesis examines the phenomenon of external possession, in which a possessor of a verb's argument is licensed syntactically as an argument of the verb. I provide a uniform account of external possession in Japanese and Korean in terms of a thematic operation.

I develop a theory of θ-role assignment which takes seriously the widely held assumption that θ-roles are purely syntactic objects and hence exist independently of the semantics associated with them. This view suggests that θ-roles can be dissociated from the semantics determined by the predicate's lexical meaning and be re-associated with distinct semantics made available during the course of a derivation. (Samek-Lodovici 2003).

In external possession, I argue that the semantic role *Possessor* is re-associated with a θ-role of the verb. This process is possible when the possessor is realised as a resumptive *pro* within the projection of the possessee argument, which has the consequence that the semantic representation of the possessee argument contains a variable corresponding to the possessor. Under this specific circumstance, a verb's θ-role can be re-associated with the role *Possessor*. The verb subsequently assigns the re-associated θ-role to the external possessor.

I show that the present theory can explain the well-known obligatory 'affected' reading of the external possessor of an object and the lack of it for the external possessor of a subject. I argue against analyses which postulate movement of the external possessor or attribute its construal to purely semantic or pragmatic inferences, as the phenomenon is more restricted than such analyses suggest.

External possessors in Japanese and Korean take on the case of their possessees. In discussing other types of multiple nominative constructions, I demonstrate that such constructions do not necessarily involve a thematic operation. I also show that for case-licensing in these constructions, structures containing multiple specifiers as well as those with multiple copies of the licensing head are required.

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Chapter 1

Introduction

1 External Possession

In a number of languages, a possessor of a subject or an object can be expressed as a separate constituent and behave like an argument of the verb. The following are examples from some languages exhibiting this construction. This phenomenon is sometimes referred to as 'External Possession' (Payne & Barshi 1999).

(1) *Spanish*

a. El enfermero le lavó la cara al paciente
The nurse him-Dat washed the face to-the patient
'The nurse washed the patient's face for him.' (Kempchinsky 1992: 138)

b. El hombre le cortó las ramas al árbol
the man him-Dat cut the branches to-the tree
'The man cut the branches of the tree.'

(2) *Hebrew*

a. Gil higdil le-Rina et ha-tmuna
Gil enlarged to-Rina Acc the-picture
'Gil enlarged Rina's picture.' (Landau 1999: 5)

b. ha-yalda kilkela lə-Dan 'et ha-radio
the-girl spoiled to-Dan Acc the-radio
'The girl broke Dan's radio.' (Borer & Grodzinsky 1986: 181)

(3) *German*

a. Jan hat der Maria die Haare geschnitten
Jan has Maria-Dat the hair-Acc cut
'Jan has cut Mary's hair yesterday.'

b. Tim hat der Nachbarin das Auto gewaschen.
Tim has the neighbour(Dat, Fem) the car-Acc washed
'Tim washed the neighbour's car.' (Lee-Schoenfeld 2003: 1)

(4) *Japanese*

a. usagi-ga mimi-ga naga-i.
rabbit-Nom ear-Nom long-Pres
'It is rabbits which have long ears.' (modified from Takahashi 1994:395)

b. dansei-ga heikin-zyumyoo-ga mizikai.
male-Nom average-life-span-Nom short-Pres
'It is men whose average life-span is short.' (modified from Kuno 1973: 71)

(5) *Korean*

a. Mary-ka meli-ka kil-ta
Mary-Nom hair-Nom long-decl
'It is Mary whose hair is long.'

b. Mary-ka John-ul tali-lul cha-ss-ta
Mary-Nom John-Acc leg-Acc kick-Past-Decl
'Mary kicked John's leg.' (D.-I. Cho 1992: 15)

In the examples in (1), (2), (3) and (5b), a possessor of the direct object is realised externally to the constituent headed by the direct object, while in the examples (4) and (5a), a possessor of the subject is realised externally. I will call these possessors 'external possessors'. Most common types of external possession found across languages involve possessors of direct objects, as in the Spanish, German and Hebrew examples above.

It is well known that external possessors display regular argument properties. Besides the superficial observation that they all bear Case associated with constituents at the clausal level, as opposed to genitive Case, which is typically found internally to a nominal projection, they exhibit other properties associated with arguments. They can be questioned by using a wh-phrase for arguments, passivised, host a floating quantifier, bind an anaphor and so on. The following examples illustrate some of the properties. The Hebrew example in (6) demonstrates that an external possessor of the object can be questioned by 'who' independently of the object. (7) shows that it is possible for an external possessor of an object to undergo passivisation in Korean. Finally, the Japanese example in (8) illustrates that it is possible for an external possessor of a subject to act as an antecedent of the subject-oriented reflexive *zibun*.

(6) lə-mi ha-yalda kilkela 'et ha-radio?
to-who the-girl spoiled Acc the-radio
'whose radio did the girl break?' (Borer & Grodzinsky 1986: 182)

(7) Mary$_i$-ka John-hanthey t_i tali-lul cha-i-ess-ta
Mary-Nom John-by leg-Acc kick-pass-Past-Decl
'Mary was kicked in the leg by John.'

(8) John$_i$-ga hahaoya$_j$-ga zibun$_{i/j}$-o seme-ta
John-Nom mother-Nom self-Acc blame-Past
'John$_i$'s mother$_j$ blamed self$_{i/j}$.' (modified from Tateishi 1988: 339)

The argument-like behaviour of an external possessor indicates that it is licensed syntactically as an argument of the verb which heads the clause. This implies however that in each of the examples in (1)-(5), there is one argument too many for the type of predicate which heads the sentence. For instance, the Spanish examples in (1) both contain a transitive verb, yet two internal arguments are present, and the Japanese sentences in (4) are each headed by an intransitive predicate, but there are two phrases marked with the nominative case marker *ga*.

Another striking property of this phenomenon is that there is an asymmetry in the interpretation between the external possessor of a subject and that of an object. An external possessor of the internal argument is, cross-linguistically, most typically interpreted as positively or negatively 'affected' by the action denoted by the verb and the internal argument. In Spanish, Hebrew and German, the dative external possessor is understood to be positively or adversely affected (Landau 1999, Lee-Schoenfeld 2003, Payne & Barshi 1999), while in Korean only the latter reading is available (Yoon 1989, 1990). On the other hand, no such restriction applies to the external possessor of a subject. Thus, in the Japanese example in (4a), *usagi* 'rabbit' is not understood as either positively or adversely affected by having long ears. Presented with data such as above, a question which naturally arises is: how are the external possessors licensed? This question will be the topic of this thesis.

There are in fact two aspects to this question. Traditionally, the licensing of an argument involves θ-role assignment and checking / assignment of Case. Since an external possessor behaves like an argument of the verb, the relevant question becomes

(i) how is an external possessor assigned a θ-role and (ii) how is its Case checked / assigned? Let us first consider the question related to θ-roles. The θ-roles of a predicate are considered to be a lexical property of the predicate, which are assigned to appropriate arguments of the predicate (Williams 1981, Chomsky 1981). However, the above sentences are all grammatical without the external possessors. A θ-role that an external possessor receives therefore cannot be part of the verb's lexical property. Where then does the extra θ-role, in a sense, come from? Moreover, it is not sufficient that the external possessors are licensed as a syntactic argument of the verb. The semantics associated with this θ-role must ensure that it is also construed as a possessor of another argument of the same verb.

Turning to the second question concerning Case, it is obvious from the above examples that Case on an external possessor is subject to cross-linguistic variation and depends on what grammatical function the possessee bears to the verb. In Spanish, Hebrew and German, the external possessors appear in dative Case, as shown by the examples in (1), (2) and (3), respectively. Dative Case in these languages is typically associated with the grammatical function of indirect object and with certain thematic roles, such as Goal, Experiencer or Recipient. On the other hand, in Japanese and Korean, external possessors seem to take on the case of their possessees: the external possessor of a subject appears in the nominative, as in (4) and (5a), and that of an object bears accusative case, as illustrated in (5b).

A transitive verb typically has accusative Case to assign or a [+accusative] feature to check against its direct object. Since external possessors of internal arguments behave syntactically like internal arguments, it seems reasonable to assume that Case on these external possessors are also assigned / checked by the verb. However, how does a transitive verb, which is only specified for one accusative object, license dative or accusative Case on an external possessor? Similar observations can be made for examples in which the external possessor is in the nominative, namely (4) and (5a). Whatever assigns or checks nominative Case in the respective language must be able to license an extra instance of nominative phrase.

In addition to the observed difference in Case-marking on external possessors, Japanese and Korean further differ radically from most other languages which permit external possession constructions. They allow an indefinitely large number of external possessors, one possessor modifying another which immediately follows it. This is demonstrated below. The following examples all contain more than one external

possessor. The Japanese and Korean examples in (9)-(10) are grammatical, while the Spanish, Hebrew and German examples in (11)-(13) are all ungrammatical.

(9) *Japanese*

kitahankyuu-ga anettai-ga usagi-ga mimi-ga naga-i.
N.Hemisphere-Nom subtropics-Nom rabbit-Nom ear-Nom long-Pres
'It is the Northern Hemisphere, where rabbits in the subtropics have long ears.'

(10) *Korean*

Mary-ka John-ul pal-ul kkuth-ul cha-ss-ta
Mary-Nom John-Acc foot-Acc end-Acc kick-Past-Decl
'Mary kicked the end of John's foot.' (modified from S. Cho 1998: 86)

(11) *Spanish*

*El enfermero le le lavó la cara a la hermana al paciente
the nurse her-Dat him-Dat washed the face to-the sister to-the patient
'The nurse washed the patient's sister's face for him (and) for her.'
cf. El enfermero le lavó la cara a la hermana del paciente
the nurse her-Dat washed the face to-the sister of-the patient

(12) *Hebrew*

*ha-yalda kilkela lə -Dan lə-axot et ha-radio
the-girl spoiled to-Dan to-sister Acc the-radio
'The girl broke Dan's sister's radio.'
cf. ha-yalda kilkela lə-axot Dan et ha-radio
the-girl spoiled to-sister Dan Acc the-radio

(13) *German*

*Jan hat der Maria gestern ihrer Schwester die Haare geschnitten
Jan has the Mary-Dat yesterday her sister-Dat the hair-Acc cut
'Jan has cut Mary's sister's hair yesterday.'
cf. Jan hat gestern Marias Schwester die Haare geschnitten.
Jan has yesterday Maria's sister the hair-Acc cut

Japanese and Korean thus obviously exhibit extreme cases of external possession constructions. As a consequence, the question of how an external possessor is licensed becomes much more critical. It seems highly unlikely that an external possessor is an optional argument of the verb in these languages. This is because such a view amounts to claiming that Japanese and Korean predicates can have an indefinite number of optional θ-roles, which is clearly an undesirable claim to make. Whatever allows the assignment of an extra θ-role to an external possessor must be a recursive operation. Furthermore, Case checking / assignment is traditionally regarded as a bijective relation, yet in Japanese and Korean, external possessors take on the case of the possessee, resulting in a clause containing multiple phrases bearing identical case-marking. These constructions are widely referred to as multiple nominative or accusative constructions. A theory of external possession must therefore be able to account for how in some languages, but not in others, an indefinite number of θ-roles can be made available for assignment by a verb and how multiple occurrences of the same case can be licensed in a single clause. It appears that examining the extreme cases of the phenomenon may reveal more about the underlying mechanism that makes the licensing of external possessors possible. In this thesis, I will therefore concentrate specifically on Japanese and Korean. The two languages share a significant number of other properties in their syntax. Moreover, since Korean allows the possessor of an object to be licensed externally, while Japanese does not, comparing the two languages may provide some insight into why the 'affected' reading arises only for external possessors of objects.

The aim of this thesis is thus to provide a uniform account of the syntax of external possession in Japanese and Korean. I argue that there is an operation available to UG, which I will call 're-association'. This operation permits a verb to syntactically license an additional argument which is semantically construed as an argument of another argument of the same verb. Crucially, it applies precisely when an argument of the verb contains a variable. The additionally licensed argument acts as a binder for the variable. In the external possession constructions, the possessee contains a variable and the possessor acts as the antecedent for this variable. This operation licenses a possessor externally to the possessee argument regardless of whether it has the grammatical function of subject or object. The asymmetry with respect to the 'affected' interpretation of an external possessor follows from the way in which information related to participants in the eventuality described by the verb is composed.

An external possessor of an internal argument must be interpreted as a participant in the eventuality, while that of a subject need not be. In order to highlight the fact that a possessee is both a syntactic and semantic argument of the verb, while an external possessor is syntactically an argument of the verb, but is semantically an argument of the possessee, I will sometimes refer to the former as a 'core' argument of the verb, and the latter as a 'derived' argument of the verb.

Furthermore, I will demonstrate that re-association is not always necessarily involved in licensing multiple phrases bearing identical case-marking in Japanese and Korean. In other words, it is possible for more than one phrase to appear in the same case without there being a possessive relation between them. I will illustrate this point with other non-possessive types of multiple nominative constructions in Japanese. Although Korean also displays non-possessive types of multiple nominative and accusative constructions, I will restrict the discussion to Japanese in this thesis.[1]

In the remainder of this chapter, I will develop the core of the operation of re-association, which will be applied to external possession constructions in Japanese and Korean in Chapters 2 and 4 respectively. I will also introduce some other aspects of external possession which are discussed in the rest of the thesis. The following section first provides some background by comparing the account to be proposed in this thesis with alternative approaches to external possession constructions offered in the literature. In Section 3, I will propose a theory of θ-role assignment and then describe in detail how a θ-role is made available for an external possessor by means of re-association. Section 4 briefly addresses issues concerning Case on external possessors. Section 5 provides a summary of the thesis.

2 Licensing an External Possessor

The question of how one argument can be licensed syntactically by a verb and be interpreted as a possessor of another argument has been a long-standing issue. The literature offers two major approaches. One claims that an external possessor is related to a null element within the DP/NP headed by the possessee. This approach is

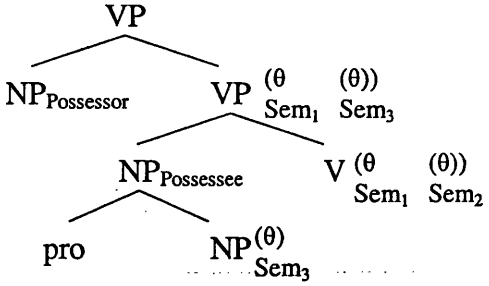
[1] See Gerdts & Youn (1988), Whitman (1991, 2000), Wechsler & Lee (1996), Schütze (1996, 2001) and J. H.-S. Yoon (2004) for non-possessive types of multiple accusative and nominative constructions in Korean.

developed based on the observation that a possessor of an argument can generally appear in the genitive or with an appropriate preposition within the possessee DP/NP. Two views have further been proposed with respect to the nature of the null element. Some argue that it is a trace created by movement of the external possessor in an operation known as *Possessor Raising* or *Possessor Ascension* (Kuno 1973, Fukuda 1991, Tateishi 1991, Kitahara 1993, Takahashi 1994, 1996, Ura 1996, S. Cho 1998, 2000, Landau 1999, Lee-Schoenfeld 2003), while others argue that it is *PRO* or *pro* bound by a base-generated external possessor (Gueron 1985, Borer & Grodzinsky 1986, Cheng & Ritter 1987, Kempchinsky 1992, Doron & Heycock 1999, Heycock & Doron 2003, Vermeulen 2002).

The other approach maintains that there is no syntactic dependency between the external possessor and any position internal to the possessee DP/NP. Some researchers have proposed that the possessive interpretation between the two arguments is derived in semantics by operations such as θ-identification in the sense of Higginbotham (1985) or Function Composition in the sense of Di Sciullo & Williams (1987) (Maling & Kim 1992, D.-I. Cho 1992, 1993, J. H.-S. Yoon 1989, 1990, J.-M. Yoon 1997) or inferred from semantics or pragmatics (Saito 1982, Heycock 1993b, Heycock & Lee 1989, 1990, Pylkkänen 2002, Shibatani 2001, Tomioka & Sim to appear).

In the theory developed in this work, the external possessor is associated with a variable, a resumptive *pro*, in the NP headed by the possessee. The presence of a variable in a core argument allows the verb to license a derived argument which acts as an antecedent for that variable by the operation of 're-association'. More specifically, the semantics associated with the θ-role assigned to the resumptive *pro* by the possessee is re-associated with the θ-role assigned to the core argument in the verb's θ-grid. The derived argument is assigned the re-associated θ-role. Thus, a clause containing an external possessor of an object has structures like the following. The details of this analysis are discussed in the next section.

(14)



One consequence of the proposed analysis is that an external possessor is licensed syntactically as an argument of the verb, since the θ-role is in the verb's θ-grid, but is interpreted semantically as an argument of the possessee, as the associated semantics is part of the lexical meaning of the possessee. A θ-role which is assigned to the external possessor becomes available in the verb's argument structure only in the course of a derivation. This seems to be a desirable result, as it is not part of the lexical property of the verb to license a possessor of one of its core arguments as its own argument.

The 'affected' interpretation of an external possessor of an object has also received two kinds of explanation in the literature. In many of the works on the Korean multiple accusative construction offered in the literature, the affected interpretation is taken to be a primitive semantic / pragmatic condition constraining the grammaticality of the construction (Yoon 1989, 1990, Shibatani 1994, Yeon 1999). By contrast, other analyses argue that the external possessor is assigned a θ-role or some features associated with an affected interpretation by a functional head (Lee-Schoenfeld 2003, Tomioka & Sim to appear), or by the verb, or by the combination of the verb and the possessee (Kempchinsky 1992, J.-M. Yoon 1997). Although analyses obviously vary in the precise manner in which the affected interpretation is obtained, most assume that the affected interpretation of an external possessor of an object is derived independently of its being licensed as a syntactic argument of the verb, while being interpreted as a semantic argument of another argument. Moreover, although it is not explicitly stated, it seems reasonable to assume that in these analyses the reason why an external possessor of a subject does not receive a comparable interpretation is due to the absence of a relevant head which can assign it an affected θ-role or that the affectedness constraint does not apply to an external possessor of a subject.

By contrast, I argue that (the lack of) the 'affected' reading arises as a result of the operation of re-association that derives the constructions. The semantics associated with θ-roles in the verb's θ-grid usually provide information as to how the recipients of the θ-roles participate in the eventuality described by the verb. However, as the semantics of a re-associated θ-role, which is assigned to an external possessor, is part of the lexical meaning of the possessee, it provides no relevant information concerning the possessor's participation in the eventuality. The affected reading obtains in such instances due to pragmatics. Considering that it must be part of the eventuality, it seems most natural to interpret it as somehow affected by the eventuality (Shibatani

1994). In other words, the external realisation of a possessor of an object is a linguistic representation of the speaker's view of the world in which the possessor is part of the eventuality expressed by the rest of the sentence.

This, however, applies only to an external possessor of an object, which is licensed as an internal argument of the verb. I assume, following Neeleman & van de Koot (2002), that external θ-roles are no longer part of the verb's θ-grid when they are assigned to subjects. The re-associated θ-role assigned to an external possessor of a subject is an external θ-role and therefore not part of the verb's θ-grid. As a result, it need not be interpreted as a participant in the eventuality and does not receive an 'affected' reading. The proposal is developed in detail in Chapter 4.

Thus, in the theory proposed in this thesis, the affected reading follows from the interaction of the operation that derives the construction with the independent property of language that external and internal θ-roles must be distinguished.

3 Re-association

In this section, I will first spell out my assumptions about how an argument is licensed syntactically and semantically. Subsequently, I will demonstrate how a derived argument is licensed by means of the operation of re-association.

3.1 θ-role assignment

It is a widely held assumption that θ-roles are purely syntactic objects and are mapped onto particular semantics determined by the predicate's lexical semantic structure or lexical conceptual structure at the syntax-semantics interface (Grimshaw 1990, Jackendoff 1983, 1990, Zubizarreta 1987, Levin & Rappaport 1995, among many others). Thus, a verb like *kick* has a representation as in (15), in which the two θ-roles are associated with the semantic roles, *Agent* and *Patient*, respectively.

(15) kick (θ (θ))
Agent Patient

Although the associated semantics in the above representation are stated simply as *Agent* and *Patient*, I assume that they are in fact labels for formulae like the following.[2]

(16) a. λx [Agent (x)]
b. λy [Patient (y)]

Arguments replace the lambda-bound variables in the formulae, which allows the arguments to be interpreted correctly with respect to the verb. Thus, in a simple transitive sentence such as *Mary kicked John*, *Mary*, represented as the term *(mary)* below, replaces *x* and the term *(john)* replaces *y*. This ensures that *Mary* and *John* are interpreted as the agent and the patient of *kick*. However, for ease of exposition, I will use the notation in (15), unless an explicit exposition is required.

(17) a. λx [Agent (x)] (mary) → Agent (mary)
b. λy [Patient (y)] (john) → Patient (john)

An argument of a predicate is licensed as such if it meets the syntactic and semantic conditions specified by the predicate. Following Neeleman & van de Koot (2002), I assume that a θ-role represents syntactic selectional requirements on the properties of an argument, such as category and that it bears Case. An argument is licensed as a syntactic argument of the predicate, if it meets the syntactic requirements of a θ-role in the predicate's θ-grid in the configuration of sisterhood.[3] I assume that θ-roles in a θ-grid are structured according to the thematic hierarchy and that an argument must always satisfy syntactic conditions of the least prominent θ-role first

[2] The formulae in (16) in themselves are also simplification of far more complex semantic representations, as has been argued by a number of researchers (Jackendoff 1990, Levin and Rappaport 1995, Reinhart 2000, among others). However, the complexity of the notions such as *Agent* and *Patient* does not bear direct relevance to the claims made in this thesis. I will therefore use the simplified labels. I also ignore the possible presence of event/eventuality variables.

[3] Neeleman & van de Koot (2002) argue that the only structural relation which adheres to Inclusiveness (Chomsky 1995b) is in fact direct domination, rather than sisterhood. I believe domination is equally compatible with the theory proposed in the main text. However, here, I will follow the general practice and assume that the relevant relation is sisterhood.

(Grimshaw 1990). Although there are numerous versions of a thematic hierarchy on offer in the literature, I adopt here the following hierarchy proposed by Grimshaw (1990).[4]

(18) Agent > Experiencer > Goal / Source / Location > Theme

When an argument satisfies selectional requirements represented by a particular θ-role, it must also replace the variable contained in the semantics associated with that θ-role. This allows the argument a particular interpretation with respect to the predicate, licensing the argument semantically. Thus, an argument is licensed if it meets the syntactic conditions of a relevant θ-role under sisterhood and replaces the variable contained in the semantics associated with the same θ-role. Consequently, when an argument and a node containing the predicate's θ-grid appear in the structural configuration of sisterhood, a θ-role is not assigned to that argument in the sense assumed in Government and Binding Theory (cf. Chomsky 1981) and in earlier stages of the Minimalist framework (cf. Chomsky 1995b), but the configuration merely triggers a process which allows the argument to be interpreted in a way specified by the semantics associated with that θ-role. The view of argument licensing as involving two processes is important in presenting the idea of re-association. However, once I have explicated the details of how re-association is executed in the next section, I will often refer to this process as simply 'θ-role assignment' for convenience.

In the following structure, *John* satisfies the syntactic requirements represented by the internal θ-role of the verb *kick*, the least prominent θ-role in the verb's θ-grid, because *John* has appropriate syntactic properties, such as accusative Case and the category NP, and it appears in a sisterhood configuration to a node containing the verb's θ-grid, namely V.[5] (The order of NP and V is irrelevant here.) *John* then replaces the variable contained in the semantics associated with the internal θ-role, *Patient*, as in (17b). This allows *John* to be interpreted as the patient of *kick*. # indicates that the semantics no longer contains a variable.

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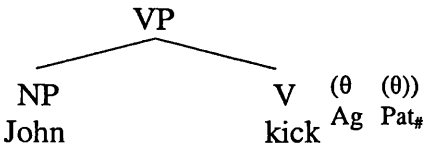
[4] See Grimshaw (1990) for references for other versions of thematic hierarchy

[5] The argument is represented as NP in the structure in (24). This is because I assume that nominal phrases in Japanese and Korean are NPs rather than DPs. However, nothing in the proposal hinges on this assumption.

(19)

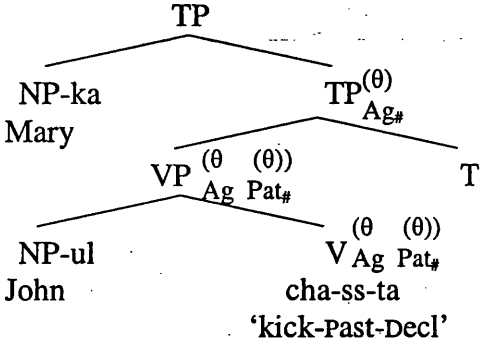


Note that the θ-grid is represented with the associated semantics in the above structure. However, I believe that semantic information is actually not present in syntactic structures, but in semantic representations, which mirror the syntactic structures in accordance with principles of compositionality. The above notation is employed merely for ease of exposition. The presence of semantic information on a particular node in a syntactic representation should be taken only as an indication that the semantic information is available on that node in a corresponding semantic representation.

Following Neeleman & van de Koot (2002), I assume that the θ-grid is copied up the tree along the projection line of the predicate until the selectional requirements of all the internal θ-roles contained in the θ-grid are satisfied. The external θ-role is copied up on its own without any information related to the internal organisation of the θ-grid. This assumption derives welcome effects in explaining properties unique to external arguments. However, since the assumption has no direct consequences for the analyses proposed in Chapters 2 and 3, I will simply adopt this assumption here and defer its elaboration until Chapter 4. Thus, the Korean sentence in (20) can be represented as (21) under this approach.

(20) Mary-ka John-ul cha-ss-ta
Mary-Nom John-Acc kick-Past-Decl
'Mary kicked John.'

(21)



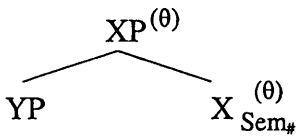
The subject *Mary-ka* satisfies the syntactic requirements of the verb's external θ-role, which has been copied up to TP. As the above structure implies, I assume that the subject is base-generated in a specifier position of a functional projection above VP. I will argue in Chapter 5 that this is a consequence of the general view that syntactic predicates must be maximal projections (cf. Williams 1980, Heycock 1994, Chomsky 1995b).

Thus, an argument is licensed as such if it satisfies the syntactic conditions represented by a θ-role of the predicate and replaces the variable contained in the semantics associated with the same θ-role. I will now turn to the issue of how a θ-role can be re-associated so that an extra argument can be licensed.

3.2 Re-associating a θ-role

The common view that θ-roles are mapped onto particular semantics only at the interface suggests that a θ-role and its associated semantics exist independently of each other and various operations may refer to them separately (Samek-Lodovici 2003). If this is indeed the case, it should be possible for them to be dissociated from one another and for a dissociated θ-role to be re-associated with different semantics during the course of a derivation. Samek-Lodovici (2003) shows that this is indeed attested in Italian light verb constructions, to which I will return in Chapter 6. Here, I propose that a θ-role may be dissociated from its associated semantics, if an argument has satisfied its syntactic requirements. One way of representing this idea is as in (22), where YP, an argument, satisfies the θ-role in the predicate's θ-grid under sisterhood and in copying up the θ-role to a dominating node, it is dissociated from its associated semantics in the process, yielding a θ-role without any semantics.

(22)



However, a θ-role without semantics is not a legitimate object. An argument may satisfy the requirements of a dissociated θ-role, but it cannot be interpreted with respect to the predicate. The principle of Full Interpretation, a condition which disallows the presence of any uninterpretable material in a structure, would prohibit

such a semantics-less θ-role, rendering a sentence containing it ungrammatical. (Chomsky 1986, cf. also Samek-Locovici 2003).

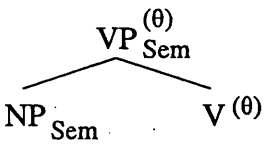
In order for a dissociated θ-role to be able to license an argument, it must be re-associated with some semantics. I argue that this effect can be achieved by an operation called 're-association', which is formulated as follows. I assume furthermore that the operation is part of UG.

(23) *Re-association*

A θ-role can be re-associated with appropriate semantics contained in an argument that satisfies it.

Appropriate semantics is semantics that contains a variable and is of a type that generally functions as an argument in the lexical conceptual structure of a predicate such as *Agent* and *Patient*. Re-association essentially allows a dissociated θ-role to be re-associated with semantics appropriate for linking to a θ-role so that it is no longer uninterpretable, as shown below. Thus, a θ-role can be dissociated from its associated semantics only if there is appropriate semantics available with which it can be re-associated.

(24)

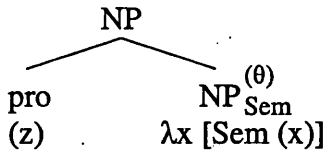


In the representation in (24), the argument of the verb contains the semantics available for re-association. One question which immediately arises is: when does such a situation arise? Considering that the semantics in question contains a variable, the argument NP must be headed by an argument-taking noun. However, θ-roles of a predicate are generally assigned within the maximal projection or the extended projection of that predicate. Moreover, I have claimed above that an argument that satisfies the requirements of a θ-role must also replace the variable in the associated semantics. It seems therefore unclear at first sight when the desired situation would arise.

I propose that it arises when an argument of an argument-taking noun is realised as a variable such as a bound pronoun or a resumptive *pro*. Bound or resumptive pronouns, as opposed to pronouns which receive a referential interpretation, are

variables at LF, since they depend on another element in the sentence for their interpretation. That pronouns in certain environments, such as VP-ellipsis contexts, may receive a bound variable interpretation is well-known (cf. Reinhart 1983 and references therein). They are legitimate syntactic items, which function as arguments. Thus, if, for instance, a resumptive *pro* appears as a sister to an argument-taking noun, as in (25a), the syntactic requirements represented by a relevant θ-role in the noun's θ-grid are satisified. However, replacing the variable in the semantics linked to the θ-role by the resumptive *pro* would yield semantics which still contains a variable, because the resumptive *pro* itself is a variable in the semantics, as illustrated in (25b), where *pro* is represented as the variable *(z)*.

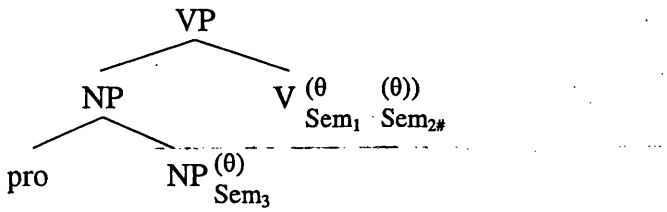
(25) a.



b. $\lambda x\ [Sem\ (x)]\ (z) \rightarrow Sem\ (z)$

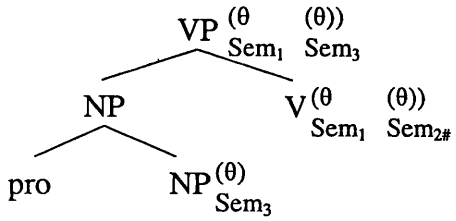
The above structure is ungrammatical as it is, as the argument of the noun lacks interpretation. Suppose that the NP in (25a) is realised as an internal argument of a transitive verb, as illustrated below. Here, it satisfies the syntactic requirements represented by the internal θ-role in the verb's θ-grid and replaces the variable in the associated semantics Sem_2, indicated by #.

(26)



Under this specific circumstance, it is possible to dissociate the verb's internal θ-role from its associated semantics, Sem_2, because it can be re-associated with distinct semantics. Consequently, the variable-containing semantics Sem_3 is re-associated with the internal θ-role in the verb's θ-grid. This process yields representations like the following.

(27)



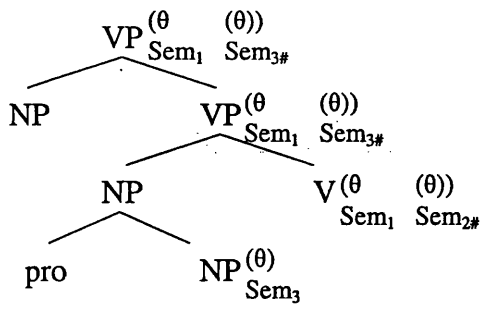
Note that the θ-grid of the VP in the above structure is now identical to that of a transitive verb: it contains two θ-roles. In terms of semantics, variable-containing semantics which is not associated with a θ-role corresponds to a logical representation with a free variable, as in (28a). A variable cannot be replaced without the semantics containing it being associated with a θ-role. Recall that an argument must satisfy the syntactic conditions of a θ-role in order to be interpreted as specified by the semantics associated with that θ-role. The situation correlates to the absence of a lambda operator in a logical representation and hence to the variable being free. Thus, re-association can essentially be viewed as an operation that introduces a lambda operator, yielding the formula in (28b). This allows the variable to be replaced by an appropriate argument.

(28) a. [Sem (z)]

b. λz [Sem (z)]

Another argument must be merged with the structure in (27) to meet the syntactic requirements of the re-associated θ-role and to replace the variable in the associated semantics. This is illustrated in (29). Recall that θ-role assignment is satisfaction of syntactic requirements by an argument under sisterhood. Thus, although the conditions represented by the internal θ-role are met at V, those represented by the same internal θ-role at VP are not.

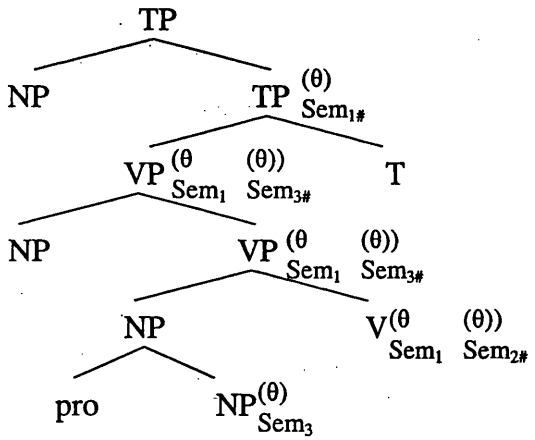
(29)



The newly introduced argument functions syntactically as an internal argument of the verb. It satisfies the syntactic conditions represented by the internal θ-role, as this is the least prominent θ-role in the θ-grid. Furthermore, it is interpreted as a semantic argument of the other internal argument, because the semantic information represented here by *Sem*$_3$ is part of the lexical meaning of the noun and not of the verb. The operation of re-association is potentially recursive. The derived argument in (29) can itself contain a *pro*, making appropriate semantics available for further re-association with the θ-role which it is assigned.

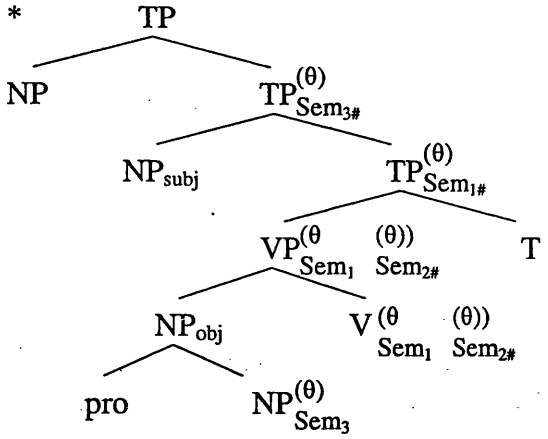
Finally, an external argument is introduced into the derivation in (29) to fulfil the syntactic conditions represented by the external θ-role in the verb's θ-grid and replace the variable in the associated semantics. This is demonstrated below in (30). Recall that only the verb's external θ-role and not the whole θ-grid is copied up beyond the verb's maximal projection.

(30)



Note that according to the formulation of re-association given in (23), it is not possible to base-generate an argument of an object above the subject. The following structure illustrates this illegal instance of re-association. This process is disallowed, since the θ-role whose conditions the subject has satisfied is re-associated with the semantics present in an argument other than the subject, namely the object. *Sem*$_3$ contained in the object can only be re-associated with the θ-role the object satisfies, as in (30).

(31) *



In sum, when an argument of the predicate contains a variable, the θ-role, whose syntactic conditions the argument satisfies, can be dissociated from its associated semantics and be re-associated with the variable-containing semantics. This allows the verb to syntactically license a semantic argument of another one of its arguments. In the following section, I will briefly illustrate how re-association can derive external possession constructions in Korean and Japanese.

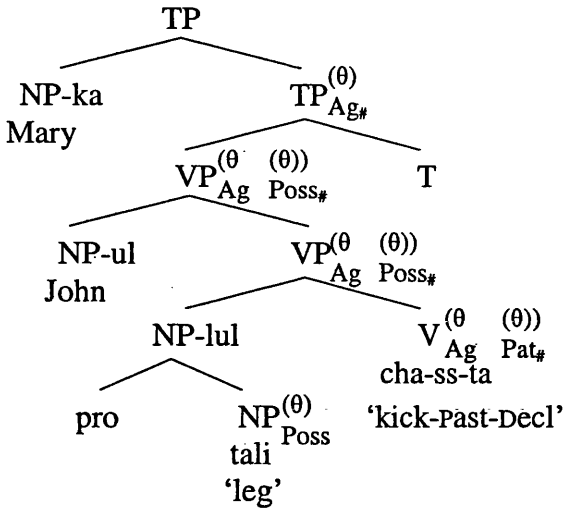
3.3 External possession in Korean and Japanese

We saw in the previous section that applying the operation of re-association to the verb's internal θ-role allows a transitive verb to syntactically license an extra internal argument which is interpreted as a semantic argument of another one of its core internal arguments. I argue that this is precisely the situation which arises in a Korean multiple accusative construction such as (5b), repeated here as (32).

(32)	Mary-ka	John-ul	tali-lul	cha-ss-ta	(Korean)
	Mary-Nom	John-Acc	leg-Acc	kick-Past-Decl	
	'Mary kicked John's leg.'				

Here, *tali*, 'leg' is the argument-taking noun and *John* is the extra internal argument. The above example therefore has a structure like the following.

(33)



The resumptive *pro* satisfies the syntactic requirements of the θ-role of the noun *tali*, 'leg', under sisterhood and replaces the variable contained by the semantics associated with the θ-role, *Possessor*. This results in *Possessor* still containing a variable, as a resumptive *pro* is a variable in the semantics. By contrast, both the syntactic and semantic requirements of the internal θ-role in the verb's θ-grid are met by the NP headed by *tali*. In other words, the NP headed by *tali* is licensed syntactically as an internal argument of the verb and is correctly interpreted as the patient of the action expressed by the verb. Since this argument contains semantics appropriate for re-association, namely *Possessor*, the θ-role assigned to this argument can be dissociated from its associated semantics *Patient* and be re-associated with *Possessor*.

John fulfils the syntactic conditions of the re-associated internal θ-role in the verb's θ-grid, the least prominent θ-role, and replaces the variable contained in *Possessor* in the semantics. As a result, *John* functions syntactically as an internal argument of the verb, but is interpreted as the possessor of *tali*, 'leg'. Recall that the semantics *Possessor* is part of the lexical meaning of *tali*, 'leg' and not that of the verb, ensuring that *John* is interpreted as a possessor of *tali*.

Re-association is equally applicable to the verb's external θ-role, if a subject is headed by an argument-taking noun and its argument is realised as a variable. I argue that this is the situation which is found in Japanese and Korean multiple nominative constructions, as in (4a-b) and (5a), repeated below as (34a-b) and (35), respectively.

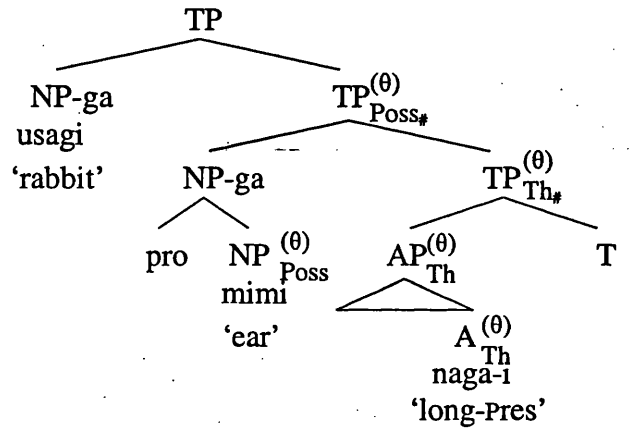
(34) a. usagi-ga mimi-ga naga-i. (Japanese)
rabbit-Nom ear-Nom long-Pres
'It is rabbits which have long ears.' (modified from Takahashi 1994:395)

b. dansei-ga heikin-zyumyoo-ga mizika-i
male-Nom average-life-span-Nom short-Pres
'It is men whose average life-span is short.' (modified from Kuno 1973: 71)

(35) Mary-ka meli-ka kil-ta (Korean)
Mary-Nom hair-Nom long-decl
'It is Mary whose hair is long.'

The following structure demonstrates for the Japanese example in (34a) how an external possessor of a subject is licensed syntactically as an external argument of the adjective and semantically as an argument of the subject.

(36)



The NP headed by *mimi* 'ear' is licensed as an external argument of *naga-i* 'long -Pres' syntactically and semantically. Since semantics containing a variable is present in the the NP headed by *mimi*, the external θ-role in the θ-grid of the adjective *naga-i* 'long-Pres' is dissociated from its associated semantics. The variable containing semantics, *Possessor*, and the dissociated θ-role are re-associated, allowing *usagi* 'rabbit' to be also licensed as an external argument of the adjective, but be interpreted as a possessor of *mimi*. External posseession in Japanese and Korean are examined in Chapters 2 and 4, respectively.

4 Case

4.1 Cross-linguistic perspective

I claimed in the previous section that re-association is universally available. However, if this is true, why does every language not allow an indefinitely large number of possessors, as in Japanese and Korean (cf. (9)-(13))? Or, why are there languages which do not permit the external possession construction at all?

Following Yoon (1989, 1990), I propose that Case is responsible for the observed cross-linguistic variation. An external possessor is licensed as an argument and as such it is subject to the Visibility Condition (Chomsky 1986), a requirement that an argument bear Case. A language must have means to assign or check Case on an external possessor. I maintain that the phenomenon of external possession is universal, while its availability and/or form are determined by the case properties of each language. Thus, if a particular language has only one instance of Case available for an extra argument, at most one extra possessor is permitted. This seems to be the situation in Spanish, Hebrew and German, which allow at most one external possessor, as we saw in Section 1. On the other hand, if a language permits multiple occurrences of case, more than one external possessor is allowed, as seems to be the situation in Japanese and Korean. The cross-linguistic variation is therefore redueced to differences in the Case system among languages.

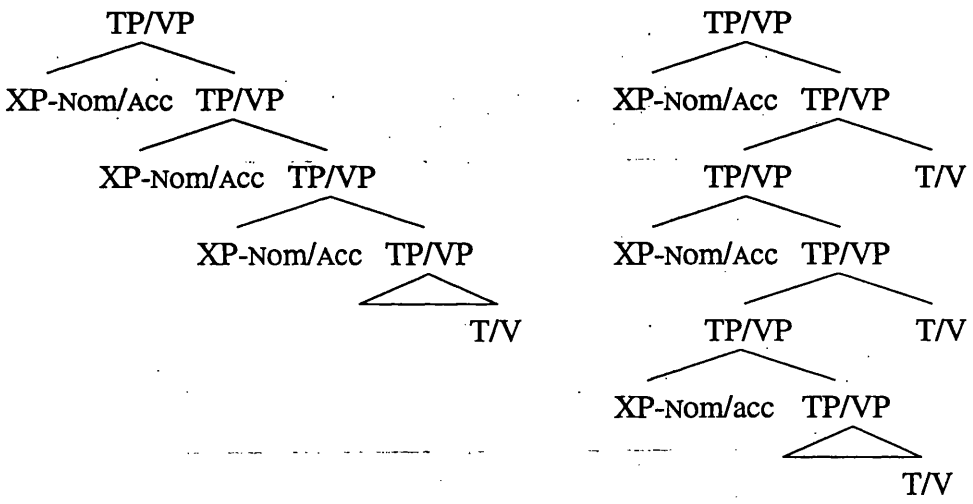
I will not discuss why Japanese and Korean differ from other languages in this respect in this thesis, but speculate in Chapter 6 that the presence of a separate particle for nominative case in a language is a prerequisite for that language permitting multiple nominative phrases. In Japanese and Korean, nominative is realised by distinct morphology, which is cross-linguistically extremely rare, accounting for the remarkable scarcity of multiple nominative constructions. Two further languages are also considered in this light in Chapter 6, namely Modern Standard Arabic and Chickasaw, a West Muskogean language.

4.2 Licensing of multiple nominative and accusative phrases

Considering that external possessors may bear the same case as their possessees, it must be possible in Japanese and Korean for a single head to license multiple occurrences of one case. A question arises as to what the configuration is in which the multiple phrases bearing identical case-marking are licensed. There are *a priori* two

possible configurations. One assumes recursion in the projection of a specifier within one particular projection such as TP or VP, resulting in one projection containing multiple specifiers, as illustrated in (37a). In this approach, one head licenses multiple nominative and accusative phrases within one maximal projection. Another possibility is to allow recursion in the projection of a head of the same category such as V or T, each of which projects its own projection. This yields a structure which contains multiple licensing heads, as shown in (37b). One head licenses no more than one instance of nominative or accusative phrase in its own projection. Multiple phrases with identical case-marking are therefore each licensed in distinct projection headed by the licensing head.

(37) a. Multiple Specifiers Configuration b. Multiple Heads Configuration



Both structures have been proposed for Korean multiple accusative constructions, while the multiple specifiers configuration in (37a) has been predominantly assumed for Japanese multiple nominative constructions.

The two configurations are equally adequate within the empirical domains of multiple nominative and accusative constructions considered in this thesis. They should therefore be compared from a theoretical perspective. I will argue in Chapter 5 that grammar in fact makes both configurations available and that the thematic nature of the phrase to be licensed determines which structure is employed. The existence of both licensing configurations is supported by the general characteristic of languages that internal arguments are licensed internally to the maximal projection of the predicate, while some maximal projection functions as a predicate for an external

argument. Repercussions of the multiple heads configuration for verb movement is also discussed.

5 Organisation of the Thesis

The thesis is organised as follows. Chapter 2 first elucidates the syntax of external possession in Japanese, which was exemplified by (4) and (9). I will call this construction the possessive multiple nominative construction. I demonstrate that the operation of re-association as developed in this chapter explains various properties of the construction straightforwardly. The present analysis makes further correct predictions regarding restrictions on the nature of the external possessor. In particular, it will be demonstrated that an external possessor cannot be an adjunct or a PP and a possessee cannot be an adjunct. In discussing alternative analyses proposed in the literature I will point out that reference to θ-roles in the operation deriving the construction is crucial in accounting for such properties. An appendix to this chapter addresses issues regarding the licenser of nominative case in Japanese.

The analysis proposed in Chapter 2 invites external possession in Japanese to be compared with two other kinds of constructions, namely other types of multiple nominative constructions, which do not entail thematic relations among nominative phrases, and external possession involving objects. Accordingly, the two ensuing chapters examine the constructions in question.

I demonstrate in Chapter 3 that re-association is not necessarily involved in licensing an additional nominative phrase in a clause in Japanese. I develop a theory of focus which uniformly explains the obligatory focus reading found with the first nominative phrase in all the three types of multiple nominative constructions. I argue that the particle *ga*, which is generally considered to be the nominative case marker, can in fact encode information regarding case as well as focus. Furthermore, I provide analyses of each type of non-possessive constructions couched in this theory of focus. Considerations concerning focus effects restrict the distribution of some types of *ga*-phrases. The proposed analyses also account for how the three constructions may interact with each other.

Chapter 4 examines an instance of external possession in Korean, where a possessor of an accusative object is licensed externally in the accusative, which was

illustrated by the examples in (5b) and (10). Japanese does not permit this kind of construction. I demonstrate that the operation of 're-association' can be easily carried over to external possession involving objects. Various properties of the accusative possessor as well as the possessee, including their object-hood and their contrasting behaviour with respect to movement, are correctly predicted. Here, I also provide an explanation for the observation that the external possessor of an object, but not of a subject, must be interpreted as 'affected'. I argue that the contrast is a result of the interaction between re-association and the independent property of language that external and internal θ-roles must be distinguished. In other words, the grammatical function of the possessee has consequences for the interpretation of its external possessor.

The analyses in Chapters 2-4 are presented in structures which assume that multiple nominative or accusative phrases are licensed in multiple specifier positions in one projection. In Chapter 5, I point out that there is no reason why this configuration should be employed exclusively and explore the potential of an alternative configuration involving multiple copies of the licensing head, as illustrated in (37b). In doing so, I will claim that there are no advantages in adopting the Universal Base Hypothesis, which states that clause structure is invariant across languages. The hypothesis is generally adopted in the minimalist framework and forces recursion in the projection of a specifier. Moreover, assuming either one of the configurations exclusively requires extra assumption prohibiting the generation of the other. I conclude therefore that both licensing configurations are permitted. The thematic nature of the phrase to be licensed dictates in which configuration it is licensed. The existence of a multiple heads configuration implies the existence of verb movement in the language. I will demonstrate that there is some evidence for finite verb movement in Japanese, also pointing out that alternatives without verb movement offered in the literature face several serious theoretical and empirical problems.

In Chapter 6, I provide a summary of the findings of the thesis as well as suggestions for how the present work may be further extended. In particular, I propose that cross-linguistic variation in the form of external possession might be explained in terms of Case theory, namely that its form is determined by the Case properties of each language. I also note some peculiarities with respect to the case paradigm of languages which permit multiple nominative constructions, namely Japanese, Korean, Modern Standard Arabic and Chickasaw, a West Muskogean language. Moreover, I suggest

that the domain of application of re-association could perhaps be explored. Nothing in the operation limits its application to external possession. I consider a possible extension of the operation to light verb constructions in Italian.

Chapter 2

External Possession in Japanese

1 Introduction

In Japanese, it is possible for a possessor of a subject to be realised as a separate constituent externally to the projection headed by the subject. An external possessor of a subject bears the same case as the subject, resulting in a clause containing more than one nominative phrase. Examples of this construction are given in (1). The particle *ga* is generally considered the marker for nominative case. (However, I will gloss the particle simply as 'GA', as its precise function will be discussed in the next chapter.) The construction is often referred to as the 'multiple nominative construction' or 'multiple subject construction'.

(1) a. usagi-ga mimi-ga naga-i.
rabbit-GA ear-GA long-Pres
'It is rabbits which have long ears.' (Takahashi 1994: 395)

b. dansee-ga heekin-zyumyoo-ga mizika-i.
male-GA average-life-span-GA short-Pres
'It is men whose average life-span is short.'(modified from Kuno 1973: 34)

c. Taroo-ga titioya-ga nyuuinsi-ta.
Taro-GA father-GA be.hospitalised-Past
'It is Taro whose father was hospitalised.'(modified from Tateishi 1991: 270)

In each of the above sentences, the two phrases carrying the marker *ga* are in a possessive relation. The first *ga*-phrase is construed as a possessor of the second *ga*-phrase, which in turn serves as the subject of the lexical predicate that follows it. In (1a), it is the 'ears' that are long, not the 'rabbits'. Similarly, in (1b), it is the life-span of the men that is short, not the men, and (1c) expresses the claim that Taro's father is hopitalised, not Taro.

That a possessive *ga*-phrase is indeed a distinct constituent from the following subject *ga*-phrase is demonstrated clearly by the fact that an adverbial may intervene between them, as shown below (Fukuda 1991, Heycock 1993b, C. Takahashi 1996).

An adverb may adjoin to a projection at the clausal level, but not to a position within an NP.

(2) a. (taitee) usagi-ga (taitee) mimi-ga (taitee) naga-i.
generally rabbit-GA generally ear-GA generally long-Pres
'It is rabbits which generally have long ears.'

b. (saikin) dansee-ga (saikin) heekin-zyumyoo-ga (saikin) mizika-i.
recently male-GA recently average-life-span-GA recently short-Pres
'It is men whose average life-span of men is recently short.'

c. (kyonen) Taroo-ga (kyonen) titioya-ga (kyonen) nyuuin-si-ta.
last.year Taro-GA last.year father-GA last.year be.hospitalised-Past
'It is Taro whose father was hospitalised last year.'

Fukuda (1991: 34) also notes that there is a short break after a possessive nominative phrase. Major constituents like arguments and adjuncts generally determine the prosodic phrasing of a sentence, but constituents within these constituents do not. (Ackema & Neeleman 2004, Selkirk & Tateishi 1988, 1991).

Furthermore, as already noted in Chapter 1, this construction allows an indefinitely large number of external possessive nominative phrases. This is demonstrated below. Each nominative phrase except the last is construed as a possessor of the immediately following nominative phrase.[1] The last nominative phrase, as in the above examples, is interpreted as the subject of the following lexical predicate.

(3) a. kitahankyuu-ga anettai-ga usagi-ga mimi-ga naga-i.
N.Hemisphere-GA subtropics-GA rabbit-GA ear-GA long-Pres
'It is the N. Hemisphere, where rabbits in the subtropics have long ears.'

[1] The translations given for the examples (3a) and (3b) may suggest that some non-subject *ga*-phrases have a locative relation rather than a possessive one. It might therefore appear that a more accurate translation is 'it is the Northern Hemisphere whose subtropics have rabbits which have long ears' and 'it is the civilised countries which have men whose average life-span is short', respectively. However, these translations allow interpretations which are not present in the examples, namely an existential reading. The examples only allow a generic reading. In order to avoid unnecessary confusion, I will refrain from using these alternative translations.

b. bunmeikoku-ga dansee-ga heekin-zyumyoo-ga mizika-i.
civilised.countries-GA male-GA average-life-span-GA short-Pres
'It is the civilised countries where the average life-span of men is short.'

c. Taroo-ga titioya-ga otooto-ga nyuuinsi-ta
Taro-GA father-GA younger.brother-GA be.hospitalised-Past
'It is Taro whose father's younger brother was hospitalised.'

(Tateishi 1991: 270)

Another striking property of this construction is that the first *ga*-phrase must be interpreted as focused. Kuno (1973) observes that it must receive an exhaustive listing reading. However, as pointed out by Shibatani (1990: 270), the exhaustive listing reading results from the effects of the Gricean maxim of quantity 'make your contribution as informative as is required' on a narrowly focused constituent. In other words, exhaustiveness is merely implied, and not necessarily required. I will therefore refer to the interpretation in question as 'narrow focus' or simply 'focus' (cf. also Heycock (1993a)).

Thus, in (1a), *usagi-ga* 'rabbit-GA' must be narrowly focused, while the second *ga*-phrase *mim-ga* 'ear-GA' is not obligatorily interpreted as such. By contrast, the same phrase, *usagi-ga*, is not focused in (3a). It is no longer the first possessive *ga*-phrase in the clause. Instead, *kitahankyuu-ga* 'Northern Hemisphere-GA' is now focused. This interpretation is implied by the use of the cleft construction in the English translations.

Japanese also permits other kinds of multiple nominative constructions, in which the non-subject nominative phrase does not have a possessive relation with the subject, as the following examples show. In (4), the non-subject *ga*-phrase *ano mise-ga* 'that shop-GA' is an adjunct, while in (5), the *ga*-phrase that follows the subject, *nihongo-ga* 'Japanese-GA', is an object. A narrow focus interpretation of the first *ga*-phrase obtains also in these two constructions. In order to distinguish the different types of multiple nominative constructions, I will call the type exemplified by the examples in (1) the 'possessive multiple nominative construction' and those illustrated by the examples in (4) and (5) the 'adjunct multiple nominative construction' and the 'stative construction', respectively.

(4) *Adjunct Multiple Nominative Construction*

ano mise-ga gakusee-ga yoku hon-o ka-u.
that shop-GA student-GA often book-Acc buy-Pres
'It is at that shop that students often buy books.'

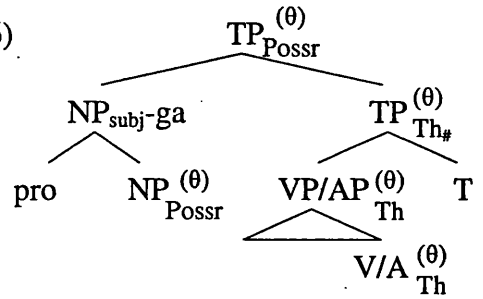
(5) *Stative Construction*

John-ga nihongo-ga wakar-u.
John-GA Japanese-GA understand-Pres
'John understands Japanese.' (Takezawa 1987:24)

Considering that it is possible for two adjacent *ga*-phrases to express relations other than a possessive relation, as in the examples in (4) and (5), it is necessary to explain how the correct interpretation of the *ga*-phrases can be ensured in each construction. In this chapter, I will provide an analysis of the possessive multiple nominative construction in terms of 're-association', the operation introduced in the previous chapter. The following chapter discusses the two types of multiple nominative constructions in (4) and (5) together with the obligatory focus of the first *ga*-phrase in the three constructions.

I argue here that the subject in each of the examples in (1) contains a resumptive *pro*. Consequently, the subject has semantics containing a variable, namely *Possessor*. This environment allows the external θ-role of the lexical predicate, which is assigned to the subject, to be re-associated with the variable-containing semantics. This is illustrated below.

(6)



The re-associated θ-role is subsequently assigned to the possessive nominative phrase. As a result, the possessive nominative phrase is licensed as a syntactic argument of the lexical predicate and a semantic argument of the subject. The well-known observation that an external possessor of a subject behaves like a subject, which is discussed in Section 2, follows readily from the proposed analysis. The re-associated θ-role, which

the external possessor receives, is an external θ-role. The external possessor therefore is licensed by predication, accounting for its subject-hood. The operation is potentially recursive, further allowing a possessor of the external possessor to appear in the nominative. This explains the possible presence of an indefinite number of possessive nominative phrases.

The analysis proposed in this chapter correctly predicts a number of properties of the construction. They include the following: (i) *pro* related to a possessive *ga*-phrase can be overtly realised; (ii) a subject-predicate relation holds between a possessive *ga*-phrase and the clause to its immediate right; (iii) a semantic argument of a nominative phrase can appear with *ga* externally to the subject, but an adjunct modifier of a nominative phrase cannot; (iv) more than one semantic argument of the same *ga*-phrase cannot be licensed in the nominative externally to that *ga*-phrase; (v) a possessive *ga*-phrase cannot be interpreted as a possessor of a noun internal to an adjunct; (vi) a possessive nominative phrase cannot be a PP.

I will also argue against three alternative analyses offered in the literature. A first is what is generally known as the *Possessor Raising* approach (Kuno 1973, Tateishi 1991, Fukuda 1991, Takahashi 1994, 1996, Ura 1996). In this approach, a possessive *ga*-phrase is base-generated in a position internally to the projection headed by the subject. It then moves and adjoins to a particular projection, such as IP or AgrSP, for case reasons. In a second alternative, possessive *ga*-phrases are base-generated in adjoined or specifier positions within one projection and the thematic relation between two adjacent *ga*-phrases arises due to semantic or pragmatic factors (Saito 1982, Heycock 1993b, Namai 1997, Shibatani 2001). Finally, a third approach also assumes that possessive *ga*-phrases are base-generated externally to their corresponding possessee *ga*-phrases, but they also bind a *pro* which appears internally to the possessee argument (Doron & Heycock 1999, Heycock & Doron 2003). I will demonstrate that the alternatives cannot easily explain some of the above-mentioned properties.

The chapter is organised as follows. Section 2 demonstrates that a possessive *ga*-phrase displays subject-like properties and independently that the clause to its right behaves like a predicate. Section 3 develops an analysis of the possessive multiple nominative construction in terms of re-association. A number of predictions made by the proposed analysis are shown to be correct in Section 4. Section 5 discusses the

alternative analyses and compares them to the present analysis. Concluding remarks are noted in Section 6.

2 A Possessive *ga*-phrase is Licensed by Predication

One insight that emerges from the literature is that a possessive nominative phrase is licensed by predication (Saito 1982, Fukuda 1991, Heycock 1993b, Heycock & Lee 1989, 1990, Namai 1997). This idea is motivated by the well-known observation that a possessive nominative phrase behaves syntactically like a subject. I believe that this is indeed correct and will demonstrate in the next section how the effect follows from an analysis in terms of re-association. In this section, I will first present evidence offered in the literature illustrating subject-hood of a possessive nominative phrase. I will then provide evidence for predicate-hood of the clause to the right of a possessive *ga*-phrase, which further supports the idea that predication is indeed involved in deriving a possessive multiple nominative construction.

2.1 Subject-like properties of a possessive *ga*-phrase

A number of researchers have reported that a possessive nominative phrase behaves like a subject (Fukuda, 1991, Heycock, 1993b, C. Takahashi, 1994, 1996, Tateishi, 1991, Ura 1996). Here, I provide four pieces of evidence suggesting the subjecthood of a possessive *ga*-phrase. It should be noted at the outset, however, that subjecthood tests in Japanese are not entirely reliable. Other constituents sometimes do show properties associated with subjects. Nevertheless, the crucial point is that subjects generally display these properties. Thus, if a possessive *ga*-phrase were to be identified as the subject of a predicate, it should display these properties as well.

Firstly, in an ECM/control construction, the possessive *ga*-phrase, when embedded, may also appear with the accusative case marker *o* (Heycock 1993b, Hiraiwa 2001, Kuno 1978, Morikawa 1993, Takahashi 1994). This property is generally associated with subjects.

(7) wareware-wa [usagi-ga/o mimi-ga naga-i]-to omoi-gati-daga....
we-Top rabbit-GA/Acc ear-GA long-Pres-Comp think-have.tendency-but...
'We have a tendency to think that rabbits have long ears, but...'

Secondly, a possessive *ga*-phrase is able to bind the subject-oriented reflexive *zibun* (Fukuda, 1991, Heycock, 1993b, C. Takahashi, 1996, Ura, 1996).[2]

(8) a. ?John$_i$-ga imooto$_j$-ga tomodati$_k$-ga zibun-no$_{i/j/k}$ gakkoo-de
John-GA younger.sister-GA friend-GA self-Gen school-at
happyoo-o sita.
presentation-Acc did
'John$_i$'s sister$_j$'s friend$_k$ gave a presentation at self$_{i/j/k}$'s school.'

b. Taroo$_i$-ga titioya$_j$-ga [zibun$_{i/j}$-ga hatumeesita kusuri-ga
Taroo-GA father-GA self-GA discovered medicine-GA
gen'in-de] nyuuinsi-ta.
cause-by be.hospitalised-Past
'It was Taroo$_i$ whose father$_j$ was hospitalised due to medicine discovered by himself$_{i/j}$.'

Thirdly, an antecedent of PRO in a *nagara*-clause 'while'-clause must be the closest c-commanding subject (Perlmutter 1984, D. Takahashi 1996). The following examples show that a possessive nominative phrase can control PRO.

(9) a. John$_i$-ga Bill-niyoruto [PRO$_i$ [zibun$_i$-no kodomotati-ga minna se-ga
John-GA Bill-according.to self-Gen children-GA all height-GA
hiku-i]-to nageitei-nagara] musume-ga zituwa se-ga taka-i.
short-Pres-Comp lamenting-while daughter-GA actually height-GA high-Pres
'According to Bill, while PRO$_i$ lamenting that (his$_i$) children are small, it is John$_i$ whose daughter is actually tall.'

b. dansee-ga tyoosa-niyoruto [PRO kenkootekina seekatu-o
male-GA survey-according.to healthy living-Acc
sitei-nagara] heekinzyumyoo-ga warito mizika-i.
doing-while average.life-span-GA quite short-Pres
'According to a survey, although PRO$_i$ leading a healthy life, men$_i$ have quite a short average life-span.

[2] This test is often considered the least reliable due to a number of counterexamples. Various semantic accounts have been provided for the *zibun*-binding phenomena in terms of empathy, logophoricity and pivot. See Iida (1996) and references cited therein for further discussion.

Finally, when the subject refers to a person for whom the speaker has respect, subject honorification is triggered on the predicate which selects it (Harada, 1976). When a possessive *ga*-phrase is a person for whom the speaker wishes to show deference and the non-possessive *ga*-phrase is inanimate, subject honorification can also be triggered on the predicate (C. Takahashi 1994, 1996, Ura 1996), as illustrated by the following example.[3]

(10) Yamaoka-sisyaku-ga bessoo-ga go-rippa-da.
Yamaoka-viscount-GA villa-GA splendour-SH-Cop
'It is Viscount Yamaoka whose villa is splendid.' (Takahashi 1994: 398)

Considering that a possessive *ga*-phrase displays the above properties associated with subject, it seems reasonable to claim that it has a subject status. This claim is further supported by the observation that the clause to its immediate right also behaves like a predicate, as discussed in the next subsection.

2.2 Predicate-like properties

There is some evidence that the clause to the immediate right of a possessive *ga*-phrase behaves like a predicate. If the clause in question is indeed a predicate, the observation lends further support to the idea that a possessive *ga*-phrase is licensed by predication. The evidence comes from two predicate-hood tests. Firstly, in a coordinate construction, both conjuncts must be of the same semantic category, such as predicates or arguments or modifiers (See Sag, Gazdar, Wasow & Weisler (1985) for a comprehensive study of coordination). Thus, a predicate can only be coordinated with another predicate. Japanese has a coordinator, *katu* 'and', which can be used for predicate coordination.[4] The following example shows that a clause containing a

[3] Interestingly, an intervening NP-*ga* referring to a person for whom the speaker does not have respect blocks subject honorification. Thus, unless the speaker has respect for Viscount Yamaoka's son, (i) is infelicitous.

(i) *Yamaoka-sisyaku-ga musuko-ga o-warai-ni-nat-ta.
Yamaoka-viscount-GA son-GA laugh-SH-Past
'It is Viscount Yamaoka whose son laughed.'

[4] Fukui & Sakai (2003) claim that the coordinator *katu* is used exclusively for predicate coordination. However, this does not seem to be entirely true, as subjects may be part of the conjuncts in *katu*-coordination, as illustrated below.

nominative NP can be conjoined with another predicate which contains no nominative NP by the coordinator *katu*. The second clause is interpreted as referring to the clause-external NP. *Katu*-coordination selects the verb in the first conjunct in the gerundive form.

(11) usagi-ga [husahusasitei-te] katu [mimi-ga naga-i]
Predicate Predicate
rabbit-GA furry-Ger. and ear-GA long-Pres
'It is rabbits which are furry and have long ears.'

The above example suggests strongly that the second conjunct is a predicate with *usagi-ga* 'rabbit-GA' as its subject.

At first sight, (11) may seem to be either a case of across-the-board movement as in (12a), or a case of left-dislocation as in (12b), where the clause-external *ga*-phrase is base-generated in an adjoined position and A'-binds a *pro* in each conjunct.

(12) a. usagi$_i$-ga [t$_i$ husahusasitei-te] katu [t$_i$ mimi-ga naga-i]
b. usagi-ga [pro husahusasitei-te] katu [pro mimi-ga naga-i]
rabbit-GA furry –Gerundive and ear-GA long-Pres

However, the analyses in (12) are unlikely to be correct. It is well known that a dislocated element must be specific and referential. Quantifiers such as *all* and *every* therefore cannot usually appear in a dislocated position, yet *subete-no usagi-ga* 'all rabbit-GA' may appear in this position, as shown below. It seems therefore that the example in (11) involves coordination of predicates.

(13) subete-no usagi-ga [husahusasitei-te] katu [mimi-ga naga-i]
all-Gen rabbit-GA furry-Gerundive and ear-GA long-Pres
'All rabbits are furry and have long ears.'

(i) [John-ga utat-te] katu [Mary-ga odot-ta].
John-GA sing-Ger. and Mary-GA dance-Past

A second test for predicate-hood involves modification by a degree adverb. A gradable predicate can usually be modified by degree adverbs such as *very* and *more*, as shown below (Bresnan 1973, Jackendoff 1977).[5]

(14) a. He is *very* [famous]
b. He is *more* [famous] than I thought.

The following examples show that both conjuncts in (11) are indeed predicates, as they can be modified by *totemo* 'very'.

(15) a. usagi-ga totemo [husahusa-site-iru]
rabbit-GA very furry-do-Pres
'It is rabbits which are very furry.'
b. usagi-ga totemo [mimi-ga naga-i]
rabbit-GA very ear-GA long-Pres
'It is rabbits which have very long ears.'

These facts, together with the evidence from the subjecthood tests, demonstrate clearly that a possessive nominative NP and the clause to its right are in a subject-predicate relation. However, the question of how this predication relation is achieved is, to my mind, not satisfactorily addressed by the analyses offered in the literature. For example, Saito (1982) and Fukuda (1991) argue that it is achieved by an 'aboutness' relation: the clause to the right of a possessive nominative phrase must be a statement about general characteristics of the possessive nominative phrase, but a formal definition of 'aboutness' is not provided. Heycock (1993b) and Namai (1997) claim that the 'aboutness' relation is a semantic correlate of syntactic predication and that a particular syntactic configuration alone establishes the predication relation, without θ-role assignment. I believe, however, that the subject-predicate relation between a possessive *ga*-phrase and the clause to its immediate right involves θ-role assignment (Browning, 1987, Chomsky, 1981, Napoli, 1989, Williams, 1980, 1994). This is

[5] The choice of what kind of degree expressions modify a gradable predicate depends on the categorial status of the predicate. I will not discuss this issue in this thesis, but see Corver (1997), Doetjes (1997) and Doetjes, Neeleman & van de Koot (2002) for comprehensive studies of degree expressions.

because, as I will demonstrate in the following section, the kind of phrase which can be realised externally to the subject is limited to those which can function as arguments of the subject. This observation seems indicative of the involvement of θ-role assignment. I will now argue that an analysis based on re-association is able to achieve precisely this effect.

3 The Structure of a Possessive Multiple Nominative Construction

In Chapter 1 I suggested that a possessive multiple nominative construction is explained in terms of re-association, an operation which was developed in detail there. Re-association allows a possessive *ga*-phrase to be licensed syntactically as an argument of the lexical predicate but semantically as a possessor of the possessee argument. I argue here that the syntactic predication relation between a possessive *ga*-phrase and the clause to its right illustrated in the previous section follows most naturally from an analysis that assumes re-association. A re-associated θ-role which is assigned to a possessive *ga*-phrase is an external θ-role of the lexical predicate. The predication relation is therefore accounted for in terms of external θ-role assignment. However, this approach also implies that a subject in this construction contains a resumptive *pro*, as its presence is a necessary ingredient for the operation to take place. In what follows, I will first provide evidence for the presence of *pro* in the subject and discuss in detail how re-association allows a possessive nominative phrase to be licensed by predication and also accounts for other properties of the construction.

3.1 *pro*

That a possessive nominative phrase is indirectly related to a resumptive *pro* internal to the subject is demonstrated clearly by the fact that it may optionally be spelled out with the genitive marker *no*, although somewhat marginally.[6] This is illustrated by the following examples. Resumptive pronouns are indicated by pronouns in brackets in the following examples.

[6] I attribute the observed degraded acceptability of the examples in the presence of overt pronouns to Avoid Pronoun Constraint, which disfavours the occurrence of an overt pronoun if it can be covert (Chomsky 1981).

(16) ?kitahankyuu$_i$-ga sono tyoosa-niyoruto
N. Hemisphere-GA this survey-according.to
(soko$_i$-no) usagi-ga mimi-ga naga-i.
there-Gen rabbit-GA ear-GA long-Pres
'According to this survey, it is the Northern Hemisphere where rabbits (there) have long ears.'

(17) ?John$_i$-ga kyonen (kare$_i$-no) titioya-ga nyuuinsi-ta.
John-GA last.year he-Gen father-GA be.hospitalised -Past
'It is John whose (his) father was hospitalised in summer last year.'

(18) ?John$_i$-ga gakkai-de (kare$_i$-no) imooto-ga happyoo-o si-ta.
John-GA conference-at he-Gen younger.sister-GA presentation-Acc do-Past
'It is John whose (his) friend gave a presentation at a conference.'

There are also other constructions in which a resumptive pronoun referring to a displaced argument may optionally appear. These constructions involve relativisation, topicalisation and *tough* movement of an NP out of an island, as shown below. In (19), the NP *sono sinsi* 'that gentleman' is relativised out of a relative clause. Similarly, *sono sinsi-wa* 'that gentleman-Top' in (20) and *kono te-no hanzai-ga* 'this kind of crime-GA' in (21) are each related to a position inside a relative clause.

(19) *Relativisation*
[$_{NP}$ Ø$_i$ [$_{TP}$[$_{NP}$ Ø$_j$ [$_{TP}$ (kare$_i$-ga) e_j kitei-ta] yoohuku-ga]
(he-GA) wearing-Past suit-GA
yogoretei-ta] sono sinsi].
dirty-Past] that gentleman
Lit.: 'A gentleman, who the suit (he) was wearing was dirty.'
(modified from Kuno (1973: 249))

(20) *Topicalisation*
sono sinsi$_i$-wa [$_{TP}$[$_{NP}$ Ø$_j$ [$_{TP}$ (kare$_i$-ga) e_j kitei-ta] yoohuku-ga] yogoretei-ta.
that gentleman-Top (he-GA) wearing-Past suit-GA dirty-Past
'Speaking of that gentleman, the suit (he) was wearing was dirty.'
(modified from Kuno (1973: 249))

(21) *Tough construction*

[kono te-no hanzai]-ga	keisatu-nitotte			
this kind of crime-GA	police-for			
[$_{NP}$ $\emptyset_j$ [$_{TP}$ e_j	(sore$_i$-o)	okasi-ta]	ningen-o]	sagasi-yasu-i.
	(it-Acc)	commit-Past	man-Acc	search-easy-Pres

Lit.: 'This kind of crime is easy for the police to search for a man who committed (it).' (modified from Takezawa (1987: 211))

Perlmutter (1972) argues that no movement of the NP *sono sinsi* 'that gentleman' is involved in deriving the example in (19), since such movement would be in violation of the island conditions, which prohibit movement out of elements such as subjects, adjuncts and relative clauses.[7] Instead, a *pro* occupies the gap in the relative clause associated with the relativised argument. Saito (1985) and Takezawa (1987) adopt this approach for topicalisation and *tough* constructions, respectively. Despite the lack of overt agreement on verbs, Japanese is a radical pro-drop language (Perlmutter 1972). Provided that its content is recoverable from the context, an argument need not be overtly expressed, as illustrated by the examples in (22).

(22) a. *e* moo dekaketa yoo-desu.
already went.out seem
'It seems that he/she/they went out already.'

b. e_i [John-ga e_j motte kuru to] omoimasu
John-GA bring Comp think
'I think that John will bring it/them.' (Saito 1985: 293)

Since it is also possible to overtly realise a resumptive *pro* related to a possessive nominative phrase internally to the following *ga*-phrase, as we saw in (16)-(18), it seems reasonable to assume that no movement of a possessive nominative phrase is involved and an example such as (1a) has partial structures like the following.

[7] There are several formulations of this condition. Most notable are Ross's (1967) island conditions, Huang's (1982) Condition on Extraction Domains (CED) and Chomsky's (1986) Subjacency. One common feature of these conditions is that they all disallow movement out of subjects, adjuncts and complex NPs such as relative clauses.

(23) usagi-ga [NP pro mimi]-ga naga-i
rabbit-GA ear-GA long-Pres

Besides, as pointed out by J. H.-S. Yoon (1987), since a subject is generally considered to be an island for movement, movement of a possessive nominative phrase out of a subject should be disallowed. Note that it is not a general property of Japanese that the island conditions do not hold. For example, as will be shown in Section 4, when a PP moves out of a subject or a relative clause, the sentence is ungrammatical.

Let us now consider how the presence of a resumptive *pro* in the subject allows an analysis of this construction in terms of re-association, which also captures the subject-predicate relation illustrated in Section 2.

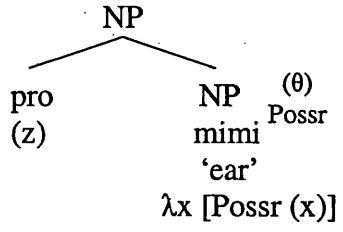
3.2 Predication by re-association

Recall from Chapter 1 that licensing an argument consists of two processes: θ-role assignment and the replacement of a variable in the associated semantics. θ-role assignment is satisfaction of the syntactic conditions represented by a θ-role by an argument under sisterhood. The argument then replaces the variable contained in the semantics associated with the θ-role. I assume that NP *mimi* 'ear' has a θ-role associated with the semantics *Possessor* in its argument structure, as shown below.

(24) *mimi* (θ)
'ear' Possr

Pro, being a legitimate syntactic object, can be assigned the θ-role in a sisterhood configuration to the NP *mimi* 'ear', as illustrated below in (25a). The *pro* then replaces the variable contained in the associated semantics, *Possessor*. This, however, results in the associated semantics still containing a variable, because a resumptive *pro* is a variable in the semantics, as demonstrated in (25b), where the resumptive *pro* is represented as the variable *(z)*.

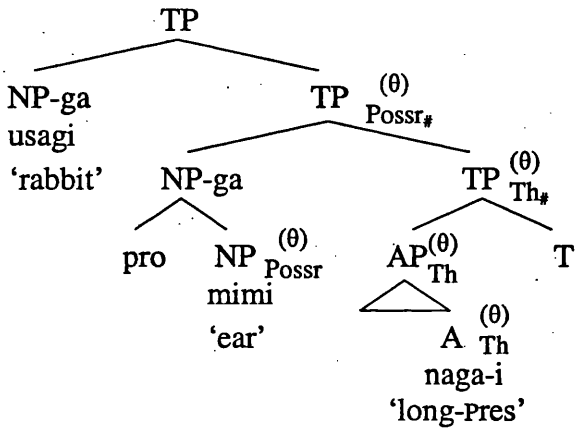
(25) a.



b. λx [Possessor (x)] (z) → Possessor (z)

The resultant semantics in (25b) is of a type that can be re-associated with another θ-role. It contains a variable and it is the kind of semantics that can function as an argument in the lexical conceptual structure of a predicate. This allows the external θ-role of the lexical predicate, which is assigned to the NP in (25a), to be dissociated from its semantics, and be re-associated with the variable-containing semantics present in the subject. This yields the structure in (26), which was suggested in Chapter 1, for the example in (1a). Following Takezawa (1987), I assume that tense licenses nominative case in Japanese.[8]

(26)



I assume furthermore for the purpose of this and the following chapter that *ga*-phrases which appear higher than the subject are licensed by a tensed head in multiple specifier positions within one projection. This is a widely adopted licensing configuration for multiple nominative constructions in Japanese (Hiraiwa 2001, Koizumi 1994, Morikawa 1993, Takahashi 1994, 1996, Takezawa 1987, Ura 1993, 1994, 1996). I will argue in Chapter 5 however that there is a viable alternative licensing configuration involving multiple copies of a tensed head. The current licensing configuration and the alternative are in fact empirically equally adequate. I will assume for the time being the standard licensing configuration with multiple specifier positions.

---

[8] This view is by no means uncontroversial. This issue is discussed in the appendix, where I suggest that there are in fact more than one licenser for nominative case in Japanese. Nevertheless, it seems to be the case that tense is responsible for the occurrence of nominative case at the clausal level. Since the main concern in this thesis is the syntax at the clausal level, I will assume that the relevant licenser is tense.

In the structure in (26), the external θ-role of the lexical predicate *nagai* 'long-PRES' is copied up to TP, where it is assigned to the NP headed by *mimi* 'ear', which allows this constituent to be interpreted as the theme argument of the lexical predicate. The θ-role then undergoes re-association with the variable-containing semantics *Possessor* present in the NP headed by *mimi* 'ear'. The possessive *ga*-phrase *usagi-ga* 'rabbit-GA' is base-generated in a specifier position in TP and receives the re-associated θ-role.

In terms of semantics, re-association is an operation that introduces a lambda operator. The variable *z* in the resultant semantics in (25b) is therefore bound by a newly introduced lambda operator, as illustrated in (27a). This further allows the formula to be applied to an argument, namely the possessive *ga*-phrase, as (27b) shows.

(27) a. Re-association: Possessor (z) → λz [Possessor (z)]
b. λz [Possessor (z)] (rabbit) → Possessor (rabbit)

On this approach, the predication relation between a possessive *ga*-phrase and the clause to its immediate right is represented as involving external θ-role assignment, as in many other instances of a subject-predicate relation (Browning 1987, Chomsky 1981, Napoli 1991, Stowell 1983, Williams 1980, 1994). The θ-role which undergoes re-association is an external θ-role of the lexical predicate, *naga-i* 'long-PRES'. The re-associated θ-role is therefore also an external θ-role of the lexical predicate. Consequently, a possessive nominative phrase, which is assigned the re-associated θ-role, is licensed syntactically as an external argument of the lexical predicate. The predicate-hood of the clause to the immediate right of a possessive *ga*-phrase follows from the fact that this clause assigns an external θ-role.

The proposed analysis accounts for other properties of the possessive multiple nominative construction described so far. Firstly, it explains the possessive relation between two adjacent *ga*-phrases. A possessive nominative phrase receives a θ-role whose associated semantics is *Possessor*. In the above structure *Possessor* is part of the lexical meaning of *mimi* 'ear' and not of the adjective *naga-i* 'long-PRES', ensuring a correct interpretation of *usagi* 'rabbit' as a possessor of *mimi* 'ear'. Secondly, it captures the observation that only the last nominative phrase in a sequence of multiple

nominative phrases is thematically selected by the lexical predicate that follows it. As already noted, the example in (1a) means that the ears are long not the rabbits.

Moreover, since re-association is potentially a recursive operation, there can be an indefinitely large number of possessive nominative phrases (cf. (3)). The possessive *ga*-phrase *usagi-ga* 'rabbit-GA' in (26) itself can contain a *pro* in its specifier position, which would allow the re-associated θ-role, which it is assigned, to undergo further re-association. This permits another base-generated *ga*-phrase to be licensed by predication and be interpreted as a possessor of *usagi* 'rabbit'. Since there is no limit on the number of specifiers permitted within one maximal projection, multiple specifiers can be projected to accommodate additional possessive *ga*-phrases, yielding examples like the following with the structure as indicated.

(28) $[_{TP}$ anettai$_i$-ga $[_{TP}$ $[_{NP}$ pro$_i$ usagi]$_j$-ga $[_{TP}$ $[_{NP}$ pro$_j$ mimi]-ga $[_{TP}$ $[_{AP}$ naga-i] T]]]].
subtropics-GA rabbit-GA ear-GA long-Pres

Note that even when there is more than one possessive *ga*-phrase, each possessive *ga*-phrase must be construed as a possessor of the immediately following *ga*-phrase. Thus, in the example in (3c), repeated below, it is not possible to interpret *Taro* as the possessor of *otooto* 'younger.brother'.

(29) Taroo-ga titioya-ga otooto-ga nyuuinsi-ta
Taro-GA father-GA younger.brother-GA be.hospitalised-Past
'It is Taro whose father's younger brother was hospitalised.'

This is because each possessive *ga*-phrase must receive a θ-role, as they are licensed syntactically as arguments. Re-associating the θ-role assigned to *otooto* 'younger.brother' with appropriate semantics contained in the argument and assigning it to *Taro* would imply that the intervening possessive *ga*-phrase *titioya* 'father' is without a θ-role, causing the derivation to crash.

Thus, the proposed analysis is able to capture the properties of the possessive multiple nominative construction observed so far. The subject-predicate relation between a possessive *ga*-phrase and the clause to its immediate right follows from the idea that a possessive *ga*-phrase is assigned an external θ-role. Re-association of a θ-role with semantics linked to the possessee argument explains the possessive relation

between two adjacent *ga*-phrases, while its potentially recursive nature accounts for the possibility of an indefinite number of possessive *ga*-phrases in a clause. The present analysis makes a number of further correct predictions, to which I now turn.

4 Predictions

The proposed analysis makes six predictions, four of which are directly related to the claim that a θ-role is involved in the process of licensing an external possessor. In this section, I will discuss them in turn and show that they are borne out.

Firstly, an analysis of the possessive multiple nominative construction based on re-association predicts that not only a possessor of the subject, but any argument of the subject should be able to appear as a *ga*-phrase externally to the NP headed by the subject. Nothing in the operation of re-association restricts its application solely to possessor arguments. Semantics appropriate for re-association is any semantics that contains a variable and that can function as an argument in a predicate's lexical conceptual structure, which include *Agent*, *Theme*, and so on.

As a result, if an argument of the subject is realised as *pro* internally to the subject, the semantics associated with the θ-role which is assigned to the *pro* becomes available for re-association. The following examples illustrate that this prediction is borne out. (30) illustrates that the theme argument of the subject, *Rome* can appear with the nominative marker *ga*, indicating that it can be licensed syntactically by the clausal predicate. Similarly, in (31) and (32), *John-ga* can be interpreted as either the agent or the theme of the action expressed by the subject. Thus, in fact, the possessive multiple nominative construction is not limited to possessors of the subject. For the sake of simplicity, however, I will continue to refer to the construction as the possessive multiple nominative construction and the derived arguments as the possessive nominative or *ga*-phrases.

(30) Roma-no/ga hakai-ga hisan datta.
Rome-GEN/GA destruction-GA horrible was
'Rome's destruction was horrible.' (modified from Saito & Murasugi (1990: 99))

(31) John-no/ga hihan-ga takusan atta.
John-Gen/GA criticism-GA many were
'There were many criticisms against / by John.'

(32) John-no/ga ansatu-ga hidok-atta.
John-Gen/GA murder-GA terrible-was.
'John's murder was terrible (John is either the theme or the agent of 'murder').'

By contrast, it should be impossible for an adjunct modifier of the subject to be realised externally to the subject. Adjuncts do not receive a θ-role and hence do not replace variables in semantics associated with θ-roles of the possessee. It is also unclear whether a *pro* can correspond to an adjunct, since pronominals generally function as arguments. The implication is that no semantics corresponding to an adjunct can be made available for re-association. The following ungrammatical examples demonstrate that an adjunct modifier of a subject which clearly does not receive a θ-role cannot be licensed externally to the subject.[9] ((33) and (34) are modified from Saito & Murasugi (1990:99)).

(33) saikin-wa ame-no/*ga hi-ga ooi.
recently-Top rain-Gen/GA day-GA many-Pres
'Recently, there have been many rainy days.'

(34) huta-kire-no/*ga hamu-ga yuusyoku-ni naru.
two-slice-Gen/GA ham-GA supper-to make.up
'Two slices of ham make up a supper.'

(35) sensyuu-no/*ga sinbun-ga husiginakoto-ni kyoo haitatu-sare-ta.
last.week-Gen/GA newspaper-GA strangely today deliver-Pass-Past
'Strangely, last week's newspaper was delivered today.'

[9] This of course raises the question of what kind of elements receive a θ-role, particularly in view of the fact that I claimed in connection to the structure in (26) that locatives such as 'Northern Hemisphere' receives a θ-role from a nominal like 'rabbit'. However it seems that certain adverbials such as locatives behave more like arguments than other adverbials such as those denoting time and manner. Starke (2001), for instance, argues that every adverbial is assigned a θ-role, but certain adverbials such as locatives receive θ-roles associated with argument behaviour ('*iθ-roles*' in his terminology), while other adverbials receive θ-roles associated with adjunct properties (simply '*θ-roles*' in his terminology).

Secondly, the proposed analysis predicts that no more than one argument of the same subject can be involved in deriving a possessive multiple nominative construction. This is because the θ-role that undergoes re-association is an external θ-role and it is a well-known property of language that a predicate generally only has one external θ-role. Consequently, even if two arguments of a noun were realised as *pro*, making semantics available for re-association for two arguments, only the semantics of one argument can be re-associated with a θ-role. This prediction is indeed correct. In Japanese, all arguments of a deverbal noun can appear in the genitive in the projection of the noun, as shown by (36a). In (36b) the agent of the deverbal noun *hiahn* 'criticism' is realised with *ga*, while (36c) illustrates that it is possible for a theme argument of the subject to appear externally to the subject with the agent remaining internally to the subject. However, as (36d) demonstrates, it is not possible for both the agent and the theme to be licensed externally to the subject.

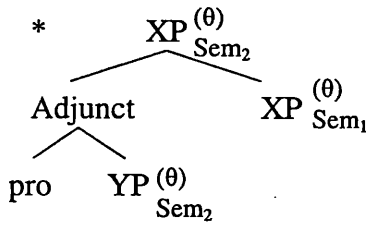
(36) a. [sensee-no gakusee-no hihan]-ga hidokatta.
teachers-Gen students-Gen criticism-GA terrible-Past
'The teachers' criticism against the students was terrible.'

b. sensee-ga [gakusee-no hihan]-ga hidokatta.
teachers-GA students-Gen criticism-GA terrible-Past

c. gakusee-ga [sensee-no hihan]-ga hidokatta.
students-GA teachers-Gen criticism-GA terrible-Past

d. *sensee-ga gakusee-ga [hihan]-ga hidokatta.
teachers-GA students-GA criticism-GA terrible-Past

Thirdly, the proposed account also restricts what kind of function the argument-taking noun must have in order to allow its argument to be licensed externally. The prediction is that the argument-taking noun must itself be an argument of the predicate which heads the clause. This is because a θ-role can only be re-associated with semantics present in a constituent that receives the θ-role. In other words, an argument of a noun contained in an adjunct cannot be licensed externally. As a result, the semantics contained in an adjunct, Sem_2 in the following representation, cannot be re-associated with the θ-role in XP's θ-grid.

(37) 

The following examples demonstrate that this option is indeed disallowed.

(38) a. *Mary-ga John-ga [pro niwa]-de mainiti hon-o yomu
Mary-GA John-GA garden-at everyday book-Acc read
Intended: 'It is John, in whose garden Mary reads books everyday.'

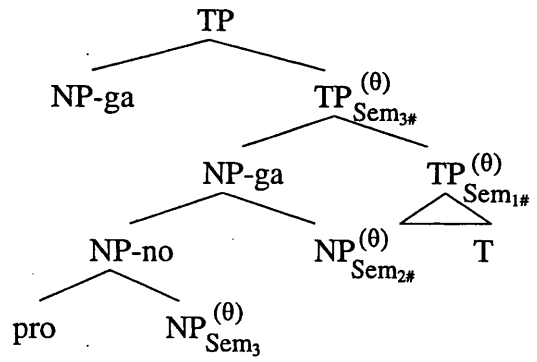
b. *Mary-ga John-ga [pro zyugyoo]-tyuu-ni yoku hanasu
Mary-GA John-GA lecture-during-in often talk
Intended: 'It is John, in whose lecture Mary often talks.'

A fourth predication is related to the locality of a dissociated θ-role and appropriate semantics which is re-associated with it. Let us first consider the definition of the operation proposed in Chapter 1, repeated below.

(39) *Re-association*
A θ-role can be re-associated with appropriate semantics contained in an argument that satisfies it.

The above formulation does not imply that semantics appropriate for re-association must be part of the lexical conceptual structure of the argument that is licensed. It merely has to be 'contained' in it. It predicts then that an argument further embedded in the subject can be re-associated with the θ-role assigned to the subject. For instance, if an argument of a subject, which is realised internally to the NP headed by the subject, also takes an argument, the latter should be able to appear in the nominative externally to the subject, as illustrated below.

(40)

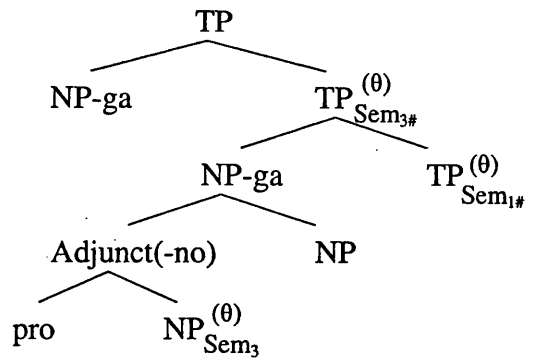


In the above structure, the subject receives the θ-role with the associated semantics *Sem1*. The subject assigns the θ-role with the associated semantics *Sem2* to its argument, which is realised with the genitive marker *no* internally to the NP headed by the subject. This argument also takes an argument, which is realised as *pro*. As a result, the genitive NP contains semantics appropriate for re-association, *Sem3*. The formulation provided above allows re-association of this semantics with the θ-role which is assigned to the subject. The re-associated θ-role is then assigned to the base-generated NP, licensing it syntactically as an argument of the lexical predicate, yet it should be interpreted as an argument of an argument of a subject. The following example shows that the prediction is borne out. In (41), *kitahankyuu* 'Northern Hemisphere' is interpreted as a possessor of the most embedded NP *usagi* 'rabbit', but is realised in the nominative externally to the subject.

(41) kitahankyuu-ga [[pro usagi]-no mimi]-ga naga-i.
N.Hemisphere-GA rabbit-Gen ear-GA long-Pres
'It is the N. Hemisphere, where rabbits have long ears.'

Moreover, according to the formulation in (39), the constituent which contains the resumptive *pro* in (40) need not be an argument. As long as what *pro* corresponds to is construed as an argument, ensuring that semantics is appropriate for the process, re-association is predicted to be possible. Consequently, if the subject contains an adjunct, and if that adjunct contains a noun, an argument of this noun can be realised externally to the subject. The following structure demonstrates the point.

(42)



The grammaticality of the following examples shows that the prediction is correct. In (43), the head of the subject NP *taido* 'attitude' takes an argument *seeto* 'student', which in turn is modified by an adjunct *[pro zyugyoo-tyuu]* 'lecture-during'. The element that corresponds to the resumptive *pro*, *rekisi* 'history' is realised externally to the NP headed by the subject. The presence of an extra argument does not make a difference to the point being made here, since what is important for testing this prediction is that *pro* is contained within an adjunct inside a subject. (44) shows that the subject of a relative clause embedded in the subject can appear externally to the subject.

(43) rekisi-ga John-niyoruto
history-GA John-according.to
[[[pro zyugyoo-tyuu]-no seeto]-no taido]-ga hidoi(-rasi-i)[10]
lecture-during-Gen student-Gen attitude-GA bad-seem-Pres
'According to John, the students' attitude during the history class seems to be bad.'

(44) sono sinsi-ga kyoo
that gentleman-GA today
[TP[NP Øj [TP pro kinoo e_j kitei-ta] yoohuku-ga] yogoretei-ta.
yesterday wearing-Past suit-GA dirty-Past
'Speaking of that gentleman, the suit (he) was wearing yesterday was dirty today.'

The above property may appear quite surprising considering that it is independently not possible for an adjunct modifier to be realised externally to the

[10] *-rasi-i* 'seem-Pres' is added here merely because the acceptability of the example improves with it. The grammaticality does not depend on its presence.

subject or for an argument contained in an adjunct at the clausal level to be realised externally to the adjunct, as we saw in (33)-(35) and (38), respectively. However, the contrast follows naturally from the fact that in the examples in (43) and (44), a dissociated θ-role and appropriate semantics are both present, while this is not the case in (33)-(35) and (38). It is not possible for an adjunct modifier to be realised externally to the subject, since semantics corresponding to an adjunct is not appropriate for re-association, while appropriate semantics present in an adjunct at the clausal level cannot be re-associated, because adjuncts do not receive a θ-role.

A fifth prediction concerns the syntactic category of the derived *ga*-phrase. Saito (1985) and Takezawa (1987) show that in topicalisation and *tough* constructions in Japanese, the topic or the subject could either be base-generated in its surface position or have moved from a clause-internal position. If it is base-generated, it must further be licensed by an 'aboutness' condition, which states that the rest of the sentence must be 'about' the phrase. However, if the topic or the subject is a PP, movement is the only option. The authors reach this conclusion from the observation that it cannot be related to a position inside an island, in violation of the island condition, and that the presence of a resumptive pronoun is also disallowed. Recall that apparent violation of the island conditions by an NP in the same constructions does not result in ungrammaticality (cf. Section 3.1).

(45) *Topicalisation*

*[$_{PP}$ Hirosima-kara$_i$]-wa Amerika-ni
Hiroshima-from-Top America-in
[$_{NP}$ Ø$_j$ [$_{TP}$ e_j (soko-kara$_i$) kita] hito]-ga oozei iru.
(there-from) came person-GA many are
Lit.: 'Speaking of from Hiroshima, there are many people in America who came (from there).' (modified from Saito (1985: 337))

(46) *Tough Construction*

*[$_{PP}$ Anna taipu-no zyosei-to]$_i$-ga
that type of woman-with-GA
[$_{NP}$ Ø$_j$ [$_{TP}$ e_j (kanozyo-to$_i$) kekkon-site-i-ru] otoko]-to hanasi-niku-i.
(she-with) marry-Pres man-with talk-hard-Pres
Lit.: 'With that type of woman is hard to talk to the man who is married (to her).'
(modified from Takezawa (1987: 215))

Saito attributes the ungrammaticality of the example in (45) to the idea that PPs cannot be licensed by 'aboutness' relation with the rest of the sentence. He specifically argues that the question of whether Japanese has PP-pro is irrelevant. However, there are other constructions in which a PP cannot be related to a position inside an island, although the constructions themselves do not appear to require 'aboutness' relation. The cleft construction is an example (Hoji 1987). As demonstrated by (47a), it is possible for an NP in the focus position of a cleft sentence to be linked to a position internal to an island. This indicates that the resumptive *pro* strategy, which we observed for relative clauses, topicalisation and tough constructions in Section 3.1, is available. On the other hand, a PP cannot be licensed in the same environment, as shown by (47b).

(47) *Cleft Construction*

a. [$_{NP}$ Ø$_i$ [$_{TP}$[$_{NP}$ Ø$_j$ [$_{TP}$ (kare$_i$-ga) e_j kitei-ta] yoohuku-ga]
(he-GA) wearing-Past suit-GA
yogoretei-ta no]-wa sono sinsi da].
dirty-Past] NMZ-Top that gentleman is
Lit.: 'It is that gentleman, who the suit (he) was wearing was dirty.'

b. *[$_{NP}$ Ø$_j$ [$_{TP}$ e_j (soko kara$_i$) ki-ta] hito]-ga
there-from come-Past person-GA
Amerika-ni oozei iru no]-wa Hiroshima-kara$_i$ da
America-in many arenmz-Top Hiroshima-from is
Lit.: 'It is from Hiroshima that there are many people in America who came (from there).'

It is difficult to argue that the focus phrases in the above sentences are licensed by 'aboutness', since there is already a topic, the preceding *wa*-phrase. Thus, I take the data in (45)-(47), to be evidence that there is no PP-pro in Japanese.

According to the proposed analysis, a derived *ga*-phrase is indirectly related to a *pro* in the following *ga*-phrase. If PP-*pro* does not exist, a PP possessor of a subject cannot be realised externally to the subject by means of re-association. The effect must be achieved by movement. However, since subjects are generally considered to be an

island for movement, it is predicted that a possessive *ga*-phrase cannot be a PP. The ungrammaticality of the following examples shows that the prediction is borne out.[11]

(48) a. *Tokyo-kara-ga zyosee-ga yoku wara-u
Tokyo-from-GA woman-GA often laugh-Pres
Lit.: '*It is from Tokyo that women often laugh.'

b. *gengogaku-nituite-ga koogi-ga omosiro-i.
linguistics-about-GA lecture-GA interesting-Pres
'It is about linguistics that the lecture is interesting.'

Crucially, the examples in (45) to (48) also illustrate that it is not a general property of Japanese that the island conditions do not hold. The apparent violation of the condition witnessed when the displaced element is an NP must be due to the availability of the resumptive *pro* strategy in Japanese.

Finally, changing the word order among *ga*-phrases should result in ungrammaticality, since a re-associated θ-role for a possessive *ga*-phrase becomes available only once the possessee is licensed. As noted by Fukuda (1991) and C. Takahashi (1994), a possessive *ga*-phrase must precede its possessee. The following example, in which the order between the two possessive *ga*-phrases, *kitahankyuu-ga* 'N. Hemisphere-GA' and *usagi-ga* 'rabbit-GA', has been reversed is ungrammatical. The prediction is therefore correct.

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[11] One may find examples like the following, where a possessive *ga*-phrase appears to be a PP, to be a piece of evidence for the existence of PP-*pro* in Japanese.

(i) N.Y.-kara-ga/no miti-ga warui.
N.Y-from-GA/Gen road-GA bad-Pres
'It is from New York, according to this survey, that roads (from there) are bad.'

However, *N.Y.-kara* 'N.Y.-from-ga' behaves like an adjunct *ga*-phrase, which I will consider in the next chapter. When it appears without *ga* or *no*, it may follow the subject NP, as shown in (ii), while such an option is unavailable to other possessive phrases, as illustrated in (iii).

(ii) miti-ga New York-kara warui.
road-GA New York-from bad-Pres
'The roads are bad from New York.'

(iii) *mimi-ga usagi-ga/no/Ø naga-i.
ear -GA rabbit-GA/Gen/Ø long-Pres

I argue that a PP in the genitive appears in SpecNP, on a par with other possessive genitive NPs, while when it appears with *ga*, it is an adjunct.

(49) *usagi-ga kitahankyuu-ga mimi-ga naga-i.
rabbit-GA N. Hemisphere-GA ear-GA long-Pres
Intended: 'Rabbits in the Northern Hemisphere have long ears.'

This property is striking, particularly because the positioning of *ga*-phrases is extremely flexible with respect to adjuncts. This was already shown for the example under discussion by the example in (2a), repeated below.

(50) (taitee) usagi-ga (taitee) mimi-ga (taitee) naga-i.
generally rabbit-GA generally ear-GA generally long-Pres
'It is rabbits which generally have long ears.'

In sum, the proposed analysis accounts for the following properties of the possessive multiple nominative construction. Recall that any semantic argument of a subject can be realised externally to the subject (point (v) below) and that I refer to such derived arguments as possessive *ga*-phrases for convenience.

(51) (i) *pro* related to a possessive *ga*-phrase can be overtly realised (cf. (16)-(18));
(ii) a possessive *ga*-phrase is interpreted correctly as a semantic argument of the immediately following *ga*-phrase (cf. Section 3);
(iii) there can be an indefinitely large number of possessive *ga*-phrases (cf. (3));
(iv) a subject-predicate relation holds between a possessive *ga*-phrase and the clause to its immediate right (cf. Section 2);
(v) any semantic argument of a subject can appear with *ga* externally to the NP headed by the subject, but an adjunct modifier of a subject cannot (cf. (30)-(35));
(vi) it is not possible for more than one argument of the same subject to be licensed externally to the NP headed by the noun (cf. (36));
(vii) an argument of a noun which is contained in an adjunct cannot be realised externally (cf. (38));
(viii) an argument contained in an NP-internal argument or an adjunct modifier of a subject can be realised externally to the subject (cf. (40)-(43));
(ix) a possessive *ga*-phrase cannot be a PP (cf. (48));
(x) the word order among *ga*-phrases is fixed (cf. (49)).

The possessive multiple nominative construction has received much attention in the literature since at least Kuno (1973). The next section discusses and compares some alternative analyses to the present account.

5 Alternative Analyses

This section considers three major approaches to the possessive multiple nominative construction in Japanese offered in the literature and shows that the analysis proposed in this chapter is able to capture properties which are difficult to explain in the alternative analyses.

5.1 *Possessor raising* approach

The process of *Possessor Raising* has been proposed on several occasions (Fukuda 1991, Morikawa 1993, Takahashi 1994, 1996, Ura 1996), also known as Subjectivization (Kuno 1973) and Genitive Raising (Tateishi 1991). On this approach, the possessive phrase is base-generated in a specifier position of the NP headed by its possessee, a position typically associated with a possessive interpretation. An argument in support for this approach is that a possessor of a subject need not always appear in the nominative, but may also bear genitive case and form a constituent with the subject. The following example illustrates that the possessive phrase *usagi* 'rabbit' can appear with the genitive case marker *no* and no adverbial may be inserted between the possessor and the possessee.

(52) usagi-no (*taitee) mimi-ga naga-i.
rabbit-Gen generally ear-GA long-Pres

When the possessive phrase appears in the genitive, it remains unmoved, while when it bears nominative case, it moves and adjoins to a clausal level projection, S or IP or AgrSP, where nominative case is licensed. This is shown below.

(53) $[_{S/IP/AgrSP}$ NP_i-Nom $[_{S/IP/AgrSP}$ $[_{NP}$ t_i NP]-Nom... VP/I/AgrS]]]

The approach explains neatly the thematic relation between two adjacent *ga*-phrases and captures a number of properties illustrated above. For example, the fact

that more than one argument of the same *ga*-phrase cannot be licensed externally can be considered as a violation of Relativised Minimality (cf. Rizzi 1990). If two elements move out of the same NP, one will cross over a trace of the other. Also, the fixed word order among *ga*-phrases follows from the presence of a possessor's trace in the possessee argument. The possessee argument cannot be moved to a position preceding its possessor, as such movement would render the trace illegally unbounded.

However, there are several problems with assuming the kind of movement illustrated in (53). Firstly, the movement is an instance of A-movement, since it is movement to a case position. A possessive *ga*-phrase should therefore exhibit properties related to a constituent which has undergone A-movement such as scope reconstruction effects. However, as pointed out by Heycock & Doron (2003), the prediction is not borne out. The following sentence, in which a possessive phrase *minna* 'everyone' is realised in the genitive, is ambiguous between two readings: a distributive reading, where each person has their own computer and they all broke down, and a collective reading, which implies that there is one computer jointly owned by everyone and it broke down.

(54) minna-no konpyuutaa-ga kowarete-simatta
everyone-Gen computer-GA broke.down
'Everyone's computer broke down.' Heycock & Doron (2003: 104)

However, when the possessor appears with the nominative marker *ga*, the collective reading is no longer available.

(55) minna-ga konpyuutaa-ga kowarete-simatta
everyone-GA computer-GA broke.down
'Everyone's computer broke down.' Heycock & Doron (2003: 104)

If the example in (55) is derived from that in (54) by movement of the possessive phrase to an A-position, one would expect both readings to be available, contrary to the fact.

From a more technical point of view, the movement itself is problematic. Firstly, as pointed out by Doron & Heycock (1999), the movement is from a case position to another case position, which is usually prohibited. Even if such movement were

permitted, it must be stipulated that nominative case overrides genitive case. Secondly, as already pointed out in Section 3.1, the movement in question is out of an island, which is generally disallowed. As we saw in Section 4, it is not the case that the island conditions can be freely violated in Japanese. Movement of a PP out of an island results in ungrammaticality (cf. (45)-(48)). A stipulation is thus required to permit this kind of movement. Fukuda (1991), for example, claims that the subject NP does not constitute a barrier in Japanese, while Takahashi (1994) argues that there is restructuring within the subject, which enables NP in the highest specifier to move out of the subject without violating the island conditions. Morikawa (1993) also proposes that the violation can be avoided in Japanese as a result of parametric variation in determining barrierhood of a particular maximal projection. It is questionable whether these assumptions can be independently motivated.

Furthermore, there are some properties observed in Section 4, which are difficult to explain on this approach, most notably the restrictions on what kind of elements can be a possessive *ga*-phrase and a possessee. Possessor raising does not impose any restriction on what the raised element can be. Thus, it can account for the fact that arguments other than possessors may be realised externally. However, this is too unrestrictive as it is. For instance, nothing rules out an adjunct modifier or a PP from undergoing possessor raising. Similarly, it is unclear why a possessor cannot be contained in an adjunct. The subject-predicate relation between a possessive *ga*-phrase and the clause to its right also does not readily follow from the analysis, since adjunction to a clausal level projection alone does not usually imply predication. It must therefore be stated independently, as Fukuda (1991) proposes, that a subject-predicate relation holds between a derived *ga*-phrase and the clause to its right in this construction.

The analysis proposed in this chapter retains an attractive aspect of the possessor raising approach, namely that the structure represents the option between the two forms of realisation available for a possessive phrase (cf. (26)). While a possessive nominative NP occupies a specifier position in TP, a possessive genitive NP appears in the position which *pro* occupies, as (56) shows.

(56) $[_{TP}\,[_{NP}$ NP-no NP]-ga T]

However, unlike the possessor raising approach, an analysis in terms of re-association does not assume movement of the possessive phrase. Rather, a possessive *ga*-phrase is indirectly related to a *pro* in the specifier position of the immediately following nominative NP. Thus, the problems of accounting for the absence of reconstruction effects, for the apparent violation of the island conditions and for genitive case being overridden by nominative case do not arise. The predication relation also follows naturally from the operation of re-association.

5.2 Base-generation approach

A second approach claims that possessive *ga*-phrases are base-generated in specifier or adjoined positions to a clausal level projection, such as S or VP without being related to a position internal to the NP headed by the argument-taking noun. The thematic relation between two adjacent *ga*-phrases is inferred from pragmatics or semantics. (Saito 1982, Heycock & Lee 1989, 1990, Heycock 1993b, Namai 1997, Shibatani 2001).

(57) [$_{S/VP}$ NP-ga [$_{S/VP}$ NP-ga VP/V]

This approach assumes no movement of a possessive nominative phrase and therefore does not face the problems related to such movement that the possessor raising approach does.

Saito (1982) implies and Heycock & Lee (1989, 1990), Heycock (1993b) and Namai (1997) explicitly state that nominative case on a possessive *ga*-phrase is an indication that it is licensed by predication by the clause to its right. Saito claims that an 'aboutness' relation holds between a possessive *ga*-phrase and the clause to its right, while Heycock & Lee, Heycock and Namai argue that the predication is achieved purely syntactically.

However, there are problems with relying entirely on semantics or pragmatics for a correct interpretation of the external possessor of a subject. Firstly, in other types of multiple nominative constructions, such as the adjunct multiple nominative construction and the stative construction exemplified in (4) and (5), no semantic relation obtains between two adjacent *ga*-phrases. Thus, the unfailing semantic relation observed in the construction under discussion must always be seen as a sheer coincidence. Moreover, on this approach, it is difficult to explain most of the syntactic

properties of this construction observed in Section 4. If possessive *ga*-phrases are simply base-generated, it is unclear why more than one semantic argument of one and the same noun cannot be licensed externally or why the derived argument must be an NP argument and not an adjunct modifier or a PP. Similarly, nothing prevents the possessee from being contained in an adjunct of the clausal predicate. Since these are syntactic properties of the construction, it seems undesirable to depend entirely on semantics or pragmatics for the well-formedness of the construction.

5.3 Base-generation + *pro* approach

A final alternative is similar to the analysis proposed in this chapter. It assumes that a possessive *ga*-phrase is base-generated in an adjoined position to a clausal level projection and is indirectly related to a resumptive *pro* which occupies a position internally to the possessee (Heycock & Doron 2003, cf. also Doron & Heycock 1999). Heycock & Doron (2003) claim that a possessive nominative phrase is interpreted as a subject of a categorical sentence, which presumably explains its behaviour as a syntactic subject. The approach does not face the problems the other two alternatives do. Since a possessive *ga*-phrase is base-generated, problems related to movement of a possessor does not arise. The thematic relation between two adjacent *ga*-phrases is explained, as a possessive *ga*-phrase is related to a position internal to the possessee. It captures most of the properties predicted by the proposed account.

One crucial difference between this alternative and the proposed account is that the former does not involve any thematic operations such as re-association. This implies that a possessee need not be an argument and wrongly predicts that it can be contained in an adjunct. Recall that semantics can only be re-associated with a θ-role which has been assigned to the argument that contains the semantics. This ensures that a possessive *ga*-phrase is an argument of a noun which in turn is an argument of a clausal predicate. Under the base-generation + *pro* approach, nothing forces the possessee itself to be an argument. As we saw in (38), a possessive *ga*-phrase may not be construed as a semantic argument of a noun in an adjunct. It appears that a mechanism that allows a semantic argument of a noun to be realised externally to the projection headed by the noun must have recourse to θ-roles.

6 Concluding Remarks

In this chapter, I have provided an account of the possessive multiple nominative construction in terms of re-association. In this construction, a subject contains a variable, a resumptive *pro*. This has the effect that variable-containing semantics appropriate for re-association becomes available within the subject. This environment allows the θ-role assigned to the subject to be dissociated from its associated semantics and re-associated with the variable-containing semantics. An external possessor of a subject receives the re-associated θ-role. Since a subject is assigned an external θ-role in the θ-grid of the lexical predicate, the re-associated θ-role is also an external θ-role. In other words, a possessive nominative phrase is syntactically licensed as an external argument of the lexical predicate.

The semantics associated with the re-associated θ-role is part of the lexical meaning of the subject. The possessive *ga*-phrase is therefore correctly interpreted as a semantic argument of the subject. The operation of re-association is potentially recursive, thus it can further apply to the external possessor of a subject, resulting in a clause containing multiple *ga*-phrases each being interpreted as a semantic argument of the immediately following *ga*-phrase. The properties which the proposed analysis is able to capture is summarised in Section 4.

In Section 5, three alternative approaches were discussed and compared to the present analysis. It was shown that the possessor raising approach can explain a number of properties, but it faces some problems in relation to the proposed movement of the external possessor. The base-generation approach assumes no movement of the external possessor and that no syntactic dependency between two adjacent *ga*-phrases. On this approach, it is unclear how in particular, syntactic properties of the construction could be explained. Finally, the base-generation + *pro* approach was shown to be the closest to the proposed analysis. Nevertheless, the lack of reference to θ-roles in licensing a possessive nominative phrase turned out to be crucial in ruling out a derivation in which the external possessor is a semantic argument of a noun contained in an adjunct.

The analysis presented in this chapter invites the possessive multiple nominative construction to be contrasted with other types of constructions on two dimensions. Firstly, considering that a single clause tolerates more than one nominative phrase in Japanese, a question arises as to whether a multiple nominative construction is possible without re-association in this language. The following chapter discusses the adjunct

multiple nominative construction and the stative construction, exemplified by (4) and (5), respectively, and demonstrates that the answer to this question is positive. This conclusion in turn has repercussions for our understanding of the precise function of the particle *ga*. The other dimension is related to the grammatical function of the possessee argument. However, it is not possible for a possessor of an accusative object to be realised externally in the accusative in Japanese, as shown below.

(58) *Mary-ga John-o asi-o ket-ta
Mary-GA John-Acc leg-Acc kick-Past
'Mary kicked John's leg.'

The ungrammaticality is generally attributed to an independent, language specific constraint called 'Double O Constraint' (cf. Harada (1973), Hiraiwa (2002) and the references cited in the latter), which prohibits the occurrence of more than one accusative phrase in a clause. I will therefore examine such construction in Korean in Chapter 4. I will argue that that the grammatical function of the possessee argument has implications for how the external possessor is interpreted.

Appendix: Licensing Nominative Case in Japanese

In Section 3, I assumed following Takezawa (1987) that tense licenses nominative case in Japanese. However, there appears to be environments in which nominative case is licensed in the absence of tense. This appendix discusses issues surrounding nominative case licensing in Japanese. I will suggest that there may be more than one licenser for nominative case.

Takezawa (1987) argues that nominative phrases are disallowed in non-finite contexts and provides the following examples. In (1), the matrix predicate *omotta* 'thought' takes a non-finite small-clause like complement, while in (2), the causative morpheme *-(s)ase* also takes a non-finite complement clause (cf. Takezawa (1987: 73-76)). In both examples a *ga*-phrase is disallowed in the complement clause.

(1) John-wa [[Mary-no yokogao]-o/*ga totemo utukusiku] omot-ta.
John-Top Mary-Gen profile-Acc/GA very beautiful think-Past
'John thought [Mary's profile (to be) very beautiful].'

(2) John-wa [Mary-ni/*ga susi-o tabe]-sase-ta
John-Top Mary-Dat/GA sushi-Acc eat-Caus-Past.
'John made Mary eat sushi.'

However, it has been reported that there are other instances in which a *ga*-phrase seems to be permitted in a non-tensed embedded environment (Fukushima 1999, Heycock 1993b, Heycock & Lee 1989, 1990, Tomioka 1992, Whitman 2001).

The following examples illustrate each of these environments. (3) shows that a *ga*-phrase may appear in a conjunct headed by a verb in a non-finite form. In (4), a VP headed by a stative verb which takes an object in the nominative, is topicalised clearly without the present tense morpheme *-(r)u*, as a dummy do *suru* is inserted to support the tense morpheme. The contrast in (5) shows that the presence of a numeral quantifier in an NP seems to license a *ga*-phrase.[12] The examples in (6) and (7) contain elements from the categories verbal nouns and adjectival nouns. Elements of these categories show hybrid properties of verbs and nouns, and adjectives and nouns, respectively. Verbal nouns generally appear with the light verb *suru*, while adjectival nouns occur with the copula *da* to function as a clausal predicate. Verbal nouns and adjectival nouns can realise their arguments internally or externally to the projection headed by them (Grimshaw & Mester 1988, Shibatani & Kageyama 1988, Kageyama 1999, Saito & Hoshi 2000). However, they may also appear embedded under elements such as *–tyuu* 'in the middle of' and *-ni tuki* 'because of'. The examples in (6) and (7) demonstrate that a *ga*-phrase can be licensed in the latter non-finite contexts.

(3) [John-ga uwagi-o nuide/nugi],
John-GA jacket-Acc take.off-ger./take.off-inf.
[Mary-ga (sore-o) hangaa-ni kake-ta]
Mary-GA it-Acc hanger-on hang-Past
'John took off his jacket and Mary put it on a hanger.'
(modified from Kuno 1973: 195)

(4) [huransugo-ga wakar-i]$_i$-sae John-wa t_i sur-u
French-GA understand-inf.-even John-Top do-Pres
Lit.: 'Even understand French, John does.' (modified from Tateishi 1994: 65)

[12] I thank Mana Kobuchi-Phillip for bringing this data to my attention.

(5) a. John-wa [onnanoko-ga 3-nin-no rockband]-o mi-ta
John-Top girl-GA 3-cl-Gen rockband-Acc see-Past
'John saw a rockband with three girls.'

b. *John-wa [onnanoko-ga rockband]-o mi-ta
John-Top girl-GA rockband-Acc see-Past
Intended: 'John saw a girl rockband.'

(6) Yamada-san-ga tyuukosya-o hanbai-tyuu-ni, doroboo-ga haitta
Yamada-Mr.-GA used.car-Acc selling-middle-Loc thief-GA entered
Lit.: 'During Mr Yamada's selling of used cars, a burglar sneaked in.'
'A burglar sneaked in while Mr. Yamada was selling used cars.'
(modified from Shibatani & Kageyama 1988: 454)

(7) singi-ga huzyuubun-ni tuki...
discussion-GA insufficient-Dat because
'because the discussion is insufficient...'
Lit. 'because of the insufficiency of the discussion...' Kageyama (1989:88)

Some researchers have concluded from observations such as above that nominative case is independent of tense and it is assigned to elements occupying specific structural positions, such as adjoined positions to S (Saito 1982) or specifier positions in VP (Fukui 1986, Heycock 1993b).

A conjunct headed by a non-tensed verb, as in (3), can be modified independently by a temporal adverbial, as shown below. Thus, it could be the case that there are some tense features present in the first non-finite conjunct distinct from the second conjunct.

(8) [John-ga kinoo uwagi-o nuide/nugi],
John-GA yesterday jacket-Acc take.off-ger./take.off-inf.
[Mary-ga kyoo (sore-o) hangaa-ni kake-ta]
Mary-GA today it-Acc hanger-on hang-Past
'John took off his jacket yesterday and Mary put it on a hanger today.'

Nevertheless, for the other instances, especially in the nominal contexts illustrated by the examples in (5)-(7), it does appear that an element other than tense is responsible for the occurrence of *ga*.

Implicit in most approaches to nominative case licensing is the idea that there is only one licenser for nominative case. Thus, Takezawa (1987) proposes that nominative case is licensed by a tensed head, while others attribute its occurrence to one particular structural environment (Saito 1982, Fukui 1986/1995, Heycock 1993b). However, there does not seem to be any valid reason why this should be so. In other words, there could be more than one licenser for *ga*. Cases generally have no unique licenser. Accusative Case, for instance, is often licensed by verbs as well as prepositions.

One may argue that in many other languages, particularly in the Indo-European family, nominative Case behaves differently from other Cases in a number of respects, one of which is that it is licensed by only one particular head such as T or one particular feature such as finiteness (Neeleman & Weerman 1999). However, as I will illustrate in more detail in Chapter 6, nominative case in Japanese appears to be different from nominative Case in other languages in that it behaves in a similar manner to other cases in the language. For example, it is morphologically realised, it is selected on the complement of some stative predicates and more than one phrase can bear it in one clause. It is perhaps thus expected that nominative case, like other cases, is licensed by more than one head in Japanese and that the occurrence of nominative case in the embedded contexts in the examples (3)-(7) is licensed by a head or features other than tense.

In order to pursue this claim, however, it is necessary to show that other cases in Japanese are indeed licensed by more than one category. Japanese postpositions do not select for a case-marked NPs. It is therefore difficult to see, for example, if accusative case is licensed by verbs as well as postpositions. However, as we saw above, Japanese has verbal nouns and adjectival nouns. The following examples show that accusative and dative cases can be licensed by elements of these categories. The verbal nouns and adjectival nouns all appear with the genitive marker *no* as modifiers of a noun to ensure that the accusative and dative phrases are properly embedded in a nominal environment and that there is no other possible licensers available. In (9a), the object of the verbal noun *minoo* 'unpaid' is licensed in the accusative, while in (9b), the deverbal noun *soosin* 'sending' licenses dative and the accusative arguments.

(9) a. [kaihi-o minoo]-no hito
fee-Acc unpaid-Gen person
'those who have not paid the membership fee' (Kageyama 1989: 88)

b. [John-ni fax-o soosin]-no sai...
John-Dat fax-Acc sending-Gen occasion
'In the even of sending a fax to John...'

Since accusative and dative cases can be licensed by more than one licenser and nominative case behaves like other cases in this language, it seems reasonable to assume that nominative case also has distinct licensers in different syntactic environments.

The primary concern in this thesis with respect to multiple nominative constructions is at the clausal level, however. Takezawa's examples in (1) and (2) demonstrate clearly that the relevant licenser in this context is tense. I will therefore continue to assume in the subsequent chapters that *ga*-phrases at the clausal level are licensed by tense in a specifier-head configuration. I will remain agnostic as to whether case-licensing takes the form of feature-checking or assignment by a head.

Chapter 3

Other Types of Multiple Nominative Constructions

1 Introduction

In addition to the possessive multiple nominative construction discussed in the previous chapter, Japanese has two other kinds of constructions containing more than one nominative phrase. I refer to them as the adjunct multiple nominative construction, illustrated in (1), and the stative construction, shown in (2).

(1) *Adjunct Multiple Nominative Construction*

a. ano mise-ga gakusee-ga hon-o yoku ka-u.
that shop-GA student-GA book-Acc often buy-Pres
'It is at that shop that students often buy books.'

b. kono yoona ziko-ga takusan-no hito-ga sin-da.
this.kind.of accident-GA many-Gen people-GA die-Past
'It is by this kind of accident that many people died.' (cf. Tateishi 1994: 21)

c. siken-mae-ga gakusee-ga tosyokan-de yoku benkyoo-sur-u
exam-before-GA student-GA library-in hard study-do-Pres
'It is before their exams that students study hard in the library.'

(2) *Stative Construction*

a. John-ga nihongo-ga wakar-u.
John-GA Japanese-GA understand-Pres
'It is John who understands Japanese.' (Takezawa 1987:24)

b. Mary-ga ryoori-ga dekir-u
Mary-GA cooking-GA able.to.do
'It is Mary who can cook.'

c. Polly-ga nihongo-ga hanas-er-u
Polly-GA Japanese-GA speak-can-Pres
'It is Polly who can speak Japanese.'

In contrast to the possessive multiple nominative construction, there is no direct thematic relation between the two adjacent *ga*-phrases in the above two constructions. In each of the examples in (1), the non-subject *ga*-phrase is interpreted as an adjunct at the clausal level. Thus, (1a) does not imply that students work at the shop, for instance. *Ano mise* 'that shop' can only be construed as the location at which students buy books. Similarly, in (1b) and (1c), the non-subject *ga*-phrases *kono yoona ziko-ga* 'this kind of accident-GA' and *siken-mae-ga* 'exam-before-GA' are understood only as adjuncts at the sentential level and not as modifiers or arguments of another argument.

The occurrence of multiple *ga*-phrases in the examples in (2) is due to certain stative predicates in Japanese selecting their object in the nominative. The predicate can be simplex, as in (2a) and (2b), or complex, as in (2c), in which the potential morpheme *er-u* 'can-Pres' is attached to the non-stative verb *hanas-* 'speak'. Again, no direct relation between the two nominative phrases is implied. In all the three examples in (2), the first *ga*-phrases are unambiguously interpreted as the subject and the second *ga*-phrases as the object of the lexical predicate that follows them.

The absence of a direct relation between two adjacent *ga*-phrases can also be demonstrated by the impossibility in both constructions of realising the first *ga*-phrase in the genitive internally to the following *ga*-phrase, while this option was shown in the previous chapter to be readily available for possessive *ga*-phrases. This is illustrated below for (1a) and (2a), respectively.[1]

(3) *[ano mise-no gakusee]-ga hon-o yoku ka-u.
that shop-Gen student-GA book-Acc often buy-Pres
'It is at that shop that students buy books.'

(4) *[John-no nihongo]-ga wakar-u.
John-Gen Japanese-GA understand-Pres
'It is John who understands Japanese.'

[1] The examples are of course grammatical with a different meaning involving a possessive relation between the two constituents in question, namely 'students of that shop often buy books' for (3) and 'one can understand John's Japanese' for (4). This alternative reading for (4) is available because Japanese is a pro-drop language, as we saw in Chapter 2 (Section 3).

Since the first nominative phrase is not construed as an argument of the following *ga*-phrase, the operation of re-association is clearly not involved in deriving the two constructions. Separate accounts must therefore be provided to ensure the correct interpretation of the non-subject *ga*-phrases.

Although the stative construction is generally considered to be a distinct type of multiple nominative construction from the possessive type, the adjunct multiple nominative construction is not. A prevalent view in the literature is that all *ga*-phrases are nominative NPs or DPs and that at least in the possessive and adjunct multiple nominative constructions they are licensed in multiple specifier or adjoined positions in one particular projection. In other words, a distinction between a possessive *ga*-phrase and an adjunct *ga*-phrase is rarely made, particularly in their syntactic status. However, there are in fact a number of striking syntactic differences between the two constructions. One such difference is found in the number of *ga*-phrases permitted in each construction. We saw in Chapter 2 that there can be an indefinitely large number of possessive nominative phrases in a single clause. An example is repeated below as (5). In stark contrast, the maximum number of adjunct *ga*-phrases allowed in a single clause is one. The ungrammaticality of the (a)-examples in (6)-(8) illustrates this point. The (b)-examples are grammatical counterparts to the respective (a)-examples, where one of the adjuncts appears with an appropriate postposition.[2]

(5) kitahankyuu-ga anettai-ga usagi-ga mimi-ga naga-i.
N.Hemisphere-GA subtropics-GA rabbit-GA ear-GA long-Pres
'It is the Northern Hemisphere, where rabbits in the subtropics have long ears.'

(6) a. *ano mise-ga ohiru zikan-ga gakusee-ga hon-o yoku ka-u.
that shop-GA lunch hour-GA student-GA book-Acc often buy-Pres
'It is at that shop and that students often buy books during their lunch hour.'

[2] It has been pointed out to me that the adjunct multiple nominative construction suffers from degraded acceptability compared to the other two kinds of multiple nominative constructions considered in this thesis. However, what is crucial is that even for those who find it slightly degraded, the constrast in the acceptability between a sentence that contains one adjunct *ga*-phrase and one that contains two is clear. The latter is decidedly ungrammatical, in line with the * given to the (b)-examples in (6)-(8). See also Tateishi (1991) for discussion on this issue.

b. ano mise-ga gakusee-ga ohiru-zikan-ni hon-o yoku ka-u.
that shop-GA student-GA lunch-hour-in book-Acc often buy-Pres

(7) a. *19-seeki-ga kono yoona ziko-ga takusan-no hito-ga sin-da.
19-century-GA this.kind.of accident-GA many-Gen people-GA die-Past
'It is in the 19th Century that many people died by this kind of accident.'
b. 19-seeki-ga takusan-no hito-ga kono yoona ziko-de sin-da.
19-century-GA many-Gen people-GA this.kind.of accident-by die-Past

(8) a. *siken-mae-ga tosyokan-ga gakusee-ga benkyoo-sur-u
exam-before-GA library-GA student-GA study-Pres
'It is in the library that students study before their exams.'
b. siken-mae-ga gakusee-ga tosyokan-de benkyoo-sur-u
exam-before-GA student-GA library-in study-Pres

It seems most evident from the above observation that a possessive *ga*-phrase and an adjunct *ga*-phrase have distinct syntactic status and hence are syntactically licensed in a different manner.

Despite the above contrasting properties, the three multiple nominative constructions share one common feature, which is that the first *ga*-phrase must be interpreted as narrowly focused, as indicated by the use of the cleft construction in the English translations. In this chapter, I will provide a uniform account of this obligatory focus interpretation of the first *ga*-phrase and show that the differences among the constructions fall out from independent properties of each type. More specifically, I will claim, contrary to the standard view, that the particle *ga* does not always function as a case marker. It can also mark focus. *Ga* functions as the nominative case marker whenever it is licensed on an NP which bears a θ-role. However, I will further propose an interpretational rule which treats it as a focus marker if the constituent to which it is attached appears as the leftmost *ga*-phrase in a clause, and also has the option to appear with a marker other than *ga* such as another case marker or a postposition.

The presence of *ga* on a phrase can thus be motivated by two reasons: (i) to satisfy the Visibility Condition (Chomsky 1986), a requirement that an argument bear Case, or; (ii) to focus the phrase to which it is attached. It can also be motivated by both of these reasons simultaneously. For instance, *ga* functions as a case marker as

well as a focus marker, if the phrase to which it is attached is an NP argument, appears as the first *ga*-phrase in the clause and has an alternative form of realisation. In other words, there is one morpheme *ga*, which carries case features, but can also be an input to an interpretational rule associated with focus. Crucially, if *ga* functions neither as a case maker nor as a focus marker, it is uninterpretable. A derivation containing such a superfluous *ga* violates the principle of Full Interpretation and crashes.

This approach to *ga*-licensing has the consequence that the non-subject *ga*-phrases are not licensed in the same manner in the three constructions. A possessive *ga*-phrase, as we saw in the previous chapter, is analysed as an NP argument bearing a θ-role. *Ga* on a possessive phrase therefore always functions as a marker for nominative case. *Ga* attached to the first possessive phrase functions furthermore as a focus marker, because the interpretational rule identifies it as such in this position.

In this chapter, I will propose that an adjunct *ga*-phrase is not a nominative phrase, contrary to the widely held view. *Ga* attached to an adjunct cannot function as a nominative case marker, since adjuncts do not require case. It must therefore be interpreted as a focus marker, or the principle of Full Interpretation would be violated. As a result, its distribution is regulated by the interpretational rule. Since the presence of *ga* on an adjunct is not motivated by case reasons, but to focus the phrase, it is not superfluous. A welcome consequence of this approach is that an adjunct followed by *ga* can be a PP, which does not usually require case either. It will be demonstrated that adjunct *ga*-phrases in the above examples are in fact underlyingly PPs followed by the particle *ga*.

In the stative construction, *ga* on the object is a case marker, since the host phrase is an NP argument. The subject of a stative predicate displays hybrid characteristics of a first possessive *ga*-phrase and an adjunct *ga*-phrase. *Ga* on the subject behaves like that on a first possessive phrase in that it functions as a case marker, as it is attached to an NP argument, as well as a focus marker, due to the relative positioning of this phrase and the possibility of the phrase appearing with a postposition. It also behaves like *ga* on an adjunct in that the subject to which it is attached can sometimes be a PP.

However, there is an environment in which the interpretational rule does not seem to be able to capture the obligatory focus of a *ga*-phrase. The subject of an intransitive stative predicate must be interpreted with narrow focus, although it is the only *ga*-phrase in the clause and it has no alternative form of realisation. Heycock &

Doron (2003) suggest that the obligatory focus of the first possessive *ga*-phrase can be accounted for in a similar fashion to the focus of the subject of an intransitive stative predicate. I will show nevertheless that the focus effects in the latter environment are determined by different factors from those that explain the focus of the first *ga*-phrases in the three types of multiple nominative constructions.

The purpose of this chapter is thus two-fold. First, I will develop a theory of how obligatory narrow focus is determined in the three multiple nominative constructions. In doing so, I will demonstrate that the particle *ga* functions as a case marker as well as a focus marker. I will subsequently provide analyses of the adjunct multiple nominative construction and the stative construction, which are couched in the proposed theory of obligatory focus. The analysis of the adjunct multiple nominative construction will also serve to explicate the disparity between adjunct *ga*-phrases and possessive *ga*-phrases.

In the following section, I will spell out the precise environment in which *ga* must be interpreted as a focus marker. Section 3 develops an analysis of the adjunct multiple nominative construction, while Section 4 discusses effects of focus in the stative construction. In Section 5, I demonstrate that the obligatory focus effects witnessed for the first *ga*-phrases in the multiple nominative constructions and for the subject of an intransitive predicate are governed by different considerations. Section 6 concludes the chapter.

2 The Particle *ga*

The particle *ga* is generally regarded as the marker for nominative case in Japanese. This appears to be a correct description to a certain extent, as thematic subjects of most transitive and intransitive predicates occur with this marker. However, it seems to have an additional interpretational effect of focusing the phrase on which it is realised, if the phrase appears as the first *ga*-phrase in a multiple nominative construction. In this connection, it is interesting to observe that a first *ga*-phrase in each of the three constructions under discussion can occur without *ga*, generally with a different marker instead of *ga*, such as a marker for another case or a postposition. With an alternative marker, the phrases are no longer obligatorily focused. We already saw in Chapter 2 that possessive phrases may be realised with the genitive case marker *no*, as in (9). Similarly, (10) illustrates that adjuncts may be marked with appropriate postpositions,

while the subjects of the stative predicates in (2) can also occur with the postposition *ni*, as shown in (11).

(9) Kitahankyuu-no usagi-no mimi-ga naga-i.
N.Hemisphere-Gen rabbit-Gen ear-GA long-Pres
'Rabbits in the Northern Hemisphere have long ears.'

(10) a. ano mise-de gakusee-ga hon-o yoku ka-u.
that shop-at student-GA book-Acc often buy-Pres
'Students often buy books at that shop.'
b. kono yoona ziko-de takusan-no hito-ga sin-da.
this.kind.of accident-by many-Gen people-GA die-Past
'It is by this kind of accident that many people died.'
c. siken-mae-ni gakusee-ga tosyokan-de yoku benkyoo-sur-u
exam-before-in student-GA library-in hard study-do-Pres
'It is before their exams that students study hard in the library.'

(11) a. John-ni nihongo-ga wakar-u.
John-to Japanese-GA understand-Pres
'John understands Japanese.'
b. Mary-ni ryoori-ga dekir-u
Mary-to cooking-GA able.to.do
'Mary can cook.'
c. Polly-ni nihongo-ga hanas-er-u
Polly-to Japanese-GA speak-can-Pres
'Polly can speak Japanese.'

This phenomenon is not observed in sentences without a multiple nominative construction. In such sentences, the nominative phrase is not focused and cannot be realised with a different particle, as shown below.

(12) a. John-ga/*no/*de/*ni netei-ru
John-GA/Gen/at/to sleep.prog-Pres
'John is sleeping.'

b. John-ga/*no/*de/*ni Mary-o mi-ta
John-GA/Gen/at/to Mary-Acc see-Past
'John saw Mary.'

It seems therefore that the obligatory focus is linked to the combination of the availability of an alternative marker for the phrase in question and its appearance as the first *ga*-phrase when they occur with *ga*. I assume a correlation between the relative positioning of the *ga*-phrase in question and the availability of an alternative marker on the one hand, and the obligatory focus imposed on the phrase on the other, and propose the following descriptive generalisation.

(13) *Focus Generalisation*
Ga is interpreted as a focus marker, if the constituent to which it is attached:
(i) appears as the leftmost *ga*-phrase in a clause and;
(ii) has an alternative form of realisation without *ga*.

The first clause can be considered as a reflection of a general property of language that focused elements tend to appear in the left-periphery. This generalisation is most concretely asserted within the Prague School tradition (Hajičová & Sgall 1988, Hajičová, Partee & Sgall 1998).[3] The condition stated in the second clause is more functionalist in nature. It is often claimed that when an element can be realised in more than one form, for example, in another case or position, a different interpretation is identified with each form (cf. for example, Bolinger (1977), de Hoop (1996) and Williams (1997)).[4] Rarely is it the case that an element with only one form of realisation is strictly associated with one non-neutral interpretation. Thus, it seems reasonable that this type of property of the host phrase is a prerequisite for the particle

[3] See also Jackendoff 1972, Kiss 1981, Rizzi 1997, Zubizarreta 1998, for approaches within the GB / Minimalist frameworks, which incorporate the generalisation by postulating specific functional projections for focused phrases.

[4] In Japanese, most constituents, including VPs, can freely be marked with the topic marker *wa* and other quantificational markers like *mo* 'also', *sae* 'even' and *dake* 'only'. However, *ga*-phrases, which do not have any alternative forms of realisation other than with these markers, are not obligatorily focused, such as the subjects in the examples in (12). I will therefore assume that these particles apparently do not count as an alternative marker for the purpose of the focus generalisation

ga to be interpreted as a focus marker.[5] Without further discussion, I will take this generalisation to operate as an interpretational rule and as such it will regulate the distribution of *ga* as a focus marker.

Ga, therefore, functions as a case marker as well as a focus marker. This variability in the function of *ga* may suggest the existence of two independent kinds of *ga*, a case marker *ga* and a focus marker *ga*. Nevertheless, I maintain that there is only one kind of *ga* and the information it encodes is constant. More precisely, a single morpheme *ga* invariably contains case features, but its presence in an environment described by the generalisation in (13) also triggers an interpretational rule at LF, which identifies it as a focus marker. The case features of *ga* are relevant to the syntax only if the constituent on which it is realised is an NP and is assigned a θ-role. The presence of *ga* as a case marker on an NP argument is thus motivated in order to satisfy the Visibility Condition. On the other hand, if it can be identified as a focus marker, its presence on a constituent that does not require case is also motivated. Crucially, *ga* whose case features are not relevant to the syntax must be interpreted as a focus marker, as the principle of Full Interpretation would otherwise be violated. I will argue in detail in the following two sections that *ga* attached to an adjunct and the subject of a stative predicate in limited contexts is interpreted only as a focus marker, because these constituents do not require case.

Thus, as long as *ga* has a function either as a case marker or as a focus marker, its presence is properly motivated. It is furthermore possible for *ga* on a single phrase to function as a case marker and be identified as a focus marker. *Ga* on a first possessive phrase is a case in point. I argued in Chapter 2 that a possessive *ga*-phrase is an NP and is assigned a θ-role as a result of re-association, rendering the case features of *ga* attached to a possessive phrase relevant to the syntax. Recall from (9) that a possessive phrase can also appear in the genitive, satisfying the condition in the clause (ii) of the

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[5] Johan Rooryck suggested to me that the CP-domain may be involved in multiple nominative constructions. For instance, it could be that the first *ga*-phrase must be licensed in a specifier position of a functional projection headed by Focus head in the sense of Rizzi (1997). However, focus in Japanese does not seem to be always related to this position. For example, a focused direct object may undergo scrambling to a position preceding an indirect object but following the subject. Furthermore, such an approach would lose the generalisation that a *ga*-phrase in a multiple nominative construction is interpreted as focused if it appears as the leftmost *ga*-phrase in the clause It is unclear what would prevent any *ga*-phrase from being licensed in a specifier position of FocusP.

focus generalisation in (13). As a consequence, if a possessive phrase appears as the leftmost *ga*-phrase in the clause, *ga* must also be interpreted as a focus marker.

In sum, although there is only one *ga*, its presence on a phrase is motivated under three different circumstances: (i) as a case marker, if the phrase is an NP bearing a θ-role; (ii) as a case marker and a focus marker, if the phrase is an NP bearing a θ-role and appears in an environment described by the focus generalisation; (iii) as a focus marker, if the phrase does not require case, but appears in an environment described by the focus generalisation.[6] The proposed view of the particle *ga* has significant effects on how an adjunct *ga*-phrase in particular should be analysed. Note that the view of the particle *ga* developed in this chapter does not affect the assumptions concerning the licensing of the particle *ga* made in Chapter 2. This is because syntactic licensing is insensitive to the diversity of syntactic or interpretational function of the licensed element. Thus, I will assume that *ga*-phrases are licensed by a tensed head regardless of the motivation for the presence of each *ga*.

There is in fact one environment involving intransitive stative predicates where the focus generalisation does not appear to hold. This issue is addressed in Section 5. Let us now consider how the adjunct multiple nominative construction can be analysed with the renewed view of the particle *ga*.

3 Adjunct Multiple Nominative Construction

3.1 Previous analyses

The adjunct multiple nominative construction has enjoyed relatively little attention in comparison to other kinds of multiple nominative constructions in Japanese. An adjunct *ga*-phrase, sometimes referred to as a 'major subject',[7] is generally considered to be a nominative phrase, licensed in an adjoined position to a tensed projection, like a possessive *ga*-phrase (Saito 1982, Kuroda 1986, Heycock 1993b, Morikawa 1993, Fujii 2001). The only distinguishing feature between an adjunct *ga*-phrase and a possessive *ga*-phrase is that some authors posit possessor raising movement out of the

[6] One might ask why the same morphological element *ga* can mark nominative case and focus. Although I have no account for this observation at present, some speculations are offered in Chapter 6.

[7] Note however that the term 'major subject' is sometimes also used confusingly to refer to a possessive *ga*-phrase as well, particularly by those who treat adjunct *ga*-phrases and possessive *ga*-phrases alike.

following *ga*-phrase for the latter, while the former is mostly assumed to be base-generated in its surface position. However, this general approach cannot easily explain some contrasting properties of the adjunct multiple nominative construction, such as the restriction on the number of *ga*-phrases permitted (cf. (5)-(8)).

To my knowledge, only Tateishi (1991) and Takahashi (1994) have explicitly provided an analysis of the adjunct multiple nominative construction as distinct from the possessive type.[8] They argue that the number of positions available for assigning nominative Case restricts the number of adjunct *ga*-phrases. I assigns nominative Case to SpecAgrSP and SpecIP positions in Tateishi's analysis and to SpecVP and SpecIP positions in Takahashi's analysis.[9] However, they both assume for the possessive multiple nominative construction that I may license nominative case more than once within one projection. Thus, as pointed out by C. Takahashi (1996), it is in fact unclear how the number of adjunct *ga*-phrases can be restricted to one. Takahashi (1994) claims that possessive nominative phrases occupy adjoined positions, where adjuncts cannot be assigned nominative Case. However, it seems rather strange to claim that an adjunct can be assigned nominative Case in one position, but not in another, where the same Case is available. Instead, I propose an account of the adjunct multiple nominative construction in terms of focus. In the following two subsections, I will argue that an adjunct *ga*-phrase is not a nominative phrase and that *ga* on an adjunct

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[8]There is another type of multiple nominative construction similar to the adjunct type, involving a locative phrase and an existential predicate, as illustrated in (i), for which a number of analyses have been proposed (cf. Kuno 1973, Ura 2000 and references cited in the latter). I believe that the present analysis for the adjunct multiple nominative construction can be extended to this construction, although I will not discuss such extension in this thesis.

(i) New York-ga koosoo kentiku-ga takusan ar-u. (Kuno 1973: 77)
New York-GA high-rise building-GA many exist-Pres

[9] Takahashi (1994) argues with the following example that the maximum number of adjunct *ga*-phrases permitted is actually two and that positions where an element may be assigned nominative case are specifier positions in two separate VPs and a specifier position in IP. However, in this example, a possessive relation holds between adjacent NPs, as demonstrated by the possibility of replacing the nominative markers with genitive markers, except on the last NP This suggests that the non-subject *ga*-phrases are in fact possessive phrases rather than adjuncts.

(i) nenmatu-ga/no hugu-ga/no syokutyuudoku-ga yoku okor-u.
year-end-GA/Gen blowfish-GA/Gen food poisoning-GA often occur-Pres
'It is at the end of the year that food poisoning occurs most frequently with blowfish.'

I assume with Tateishi (1991), therefore, that the maximum of one adjunct *ga*-phrase is allowed.

must be interpreted as a focus marker, which restricts the number of adjunct *ga*-phrases to one.

3.2 *Ga* on an adjunct is interpreted as a focus marker

Although the particle *ga* is generally regarded as the nominative case marker in Japanese, it seems unlikely that its presence on an adjunct is motivated by case requirements. This is because adjuncts do not usually require case in Japanese. Considerations of economy would prevent superfluous materials to be present in a sentence. Consequently, its presence on the phrase must be motivated by other reasons. Since an adjunct must always be interpreted as focused if it is marked with *ga*, but not if it is realised with a postposition alone, I argue that *ga* on an adjunct functions as a focus marker and not as a case marker. This claim predicts that it should be possible for an adjunct bearing *ga* to be a PP. Since PPs do not generally require case, if *ga* on an adjunct indeed has a function other than case, it should not make a difference whether the adjunct is an NP or a PP. In this section, I will show that the prediction is correct by demonstrating that the adjunct *ga*-phrases in (1) in fact have the underlying form PP-*ga* with the postposition deleted at PF.

We saw above in (10) that these adjuncts which appear as adjunct *ga*-phrases in (1) can also be realised with a postposition instead of *ga*. Interestingly, it is possible to realise both the postposition and the particle *ga*, in this order, preferably with another element such as *dake* 'only' intervening between the two particles. This is illustrated below for (1a).[10]

(14) ano mise-de-??(dake)-ga gakusee-ga hon-o yoku ka-u.
that shop-at-only-GA student-GA book-Acc often buy-Pres
'It is only at that shop that students often buy books.'

The possibility of spelling out the postposition before *ga* suggests that the adjunct *ga*-phrase is not really an NP followed by *ga*, but rather a PP followed by *ga*, with the

[10] Hiroto Hoshi (personal communication) pointed out to me that *de* can be realised before *ga* without *dake* (also cf. Kuroda (1986)). However, all my informants felt that the acceptability improves significantly with *dake*. I will therefore cite all the examples with *dake*. This should not make any difference to the analysis presented here. See Schütze (2001) for a similar phenomenon in Korean.

postposition deleted.[11] Besides, an adjunct such as *ano mise* 'that shop' alone cannot function as an adjunct referring to a location. It must be accompanied by an appropriate postposition. It seems therefore highly unlikely that the adjunct *ga*-phrases in (1) are NPs directly followed by the particle *ga*. Thus, the fact that the locational interpretation becomes available when it is followed by *ga* is also suggestive of the idea that there is a deleted postposition.

This point is further supported by an oft-employed diagnostic for determining whether a given particle is a postposition or a case marker. An NP followed by a case marker allows a floating quantifier, while an NP followed by a postposition disallows it (Shibatani 1977b, Miyagawa 1989). (15) demonstrates that *de* is indeed a postposition and that the adjunct *ga*-phrase is not a nominative NP, since no floating quantifier is permitted.

(15) *[NP tosyokan]-de/ga 2tu gakusee-ga yoku benkyoo-ga dekir-u.
library-at/GA 2-Cl student-GA well study-GA can-Pres
'It is at two libraries that students can study well.'

(cf. [NP 2tu-no tosyokan]-de/ga gakusee-ga yoku benkyoo-ga dekir-u.
2-Cl-Gen library-at/GA student-GA well study-GA can-Pres)

I conclude from the data in (14) and (15) that adjunct *ga*-phrases which can be realised with a postposition instead of *ga*, such as *ano mise* 'that shop', *kono yoona ziko* 'this kind of accident' and *siken-mae* 'exam-before', in (1) are underlyingly PPs followed by *ga* with the postposition being deleted at PF.

Note that a possessive *ga*-phrase displays different behaviour from a PP adjunct *ga*-phrase with respect to the properties observed so far. Although a possessive phrase can be realised with the genitive marker *no* instead of *ga*, it is not possible to realise both particles, even if *dake* 'only' intervened between the two particles, as shown below.

[11] Some kind of a rule for particle deletion is obviously then required to account for the optional deletion of the postposition. It seems that such a rule is generally required in Japanese, as there is a strong tendency to delete a particle if immediately followed by another. Since formulating such a rule is not the focus of this chapter, I will leave aside this issue for future research.

(16) usagi(*-no)(-dake)-ga mimi-ga naga-i.
rabbit-Gen-only-GA ear-GA long-Pres

Moreover, (17) illustrates that a possessive *ga*-phrase is able to host a floating quantifier.

(17) John-ga tomodati-ga 2ri se-ga taka-i.
John-GA friends-GA 2-Cl height-GA high-Pres
'It is John whose two friends are tall.'

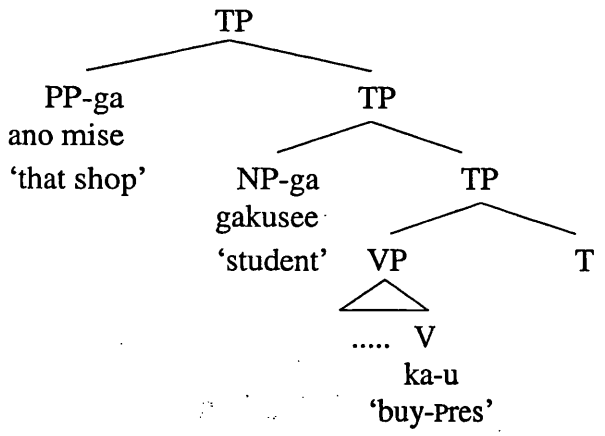
It is unclear how these disparate properties between a possessive *ga*-phrase and an adjunct *ga*-phrase can be explained if they are both analysed as nominative phrases.

The data discussed above show that the presence of *ga* on an adjunct is motivated by different considerations from that on a possessive NP. *Ga* on the latter functions primarily as a case marker, as argued in Section 2, since possessive phrases are NP arguments. By contrast, the case features of *ga* on an adjunct are never relevant to the syntax, since adjuncts are not arguments. Consequently, it must be interpreted as a focus marker in order not to violate the principle of Full Interpretation. As will be discussed in the next subsection, this conclusion has significant repercussions on the structure of the adjunct multiple nominative construction.

3.3 The structure of an adjunct multiple nominative construction

The particle *ga* can be interpreted as a focus marker at LF, if it is licensed in an environment described by the focus generalisation in (13). This has the effect that an adjunct *ga*-phrase always appears as the leftmost *ga*-phrase in the clause. Assuming that *ga*-phrases which are structurally higher than the subject are licensed in specifier positions in TP, an adjunct *ga*-phrase must appear as the highest *ga*-phrase in TP, yielding structures like the following for (1a). A tensed head licenses *ga* on both *ga*-phrases.

(18)



This analysis explains why there cannot be more than one adjunct *ga*-phrase in a clause (cf. (6)-(8)). Nothing prevents another adjunct *ga*-phrase from being base-generated in the structure in (18), as illustrated below.

(19) * [$_{TP}$ adjunct-ga [$_{TP}$ adjunct-ga [$_{TP}$ subject-ga [$_{TP}$ VP T]]]

However, placing an adjunct *ga*-phrase above another renders the *ga* attached to the lower adjunct uninterpretable. This is because it cannot function as a case marker or be interpreted as a focus marker in this position. The derivation therefore violates the principle of Full Interpretation and hence crashes.[12]

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[12] One might consider that examples like the following illustrates the possibility of more than one adjunct *ga*-phrase appearing in a clause, contrary to what the above proposal predicts.

(i) kono eki-kara-ga Tokyo-hoomen-e-ga zyookyaku-ga oo-i.
this station-from-GA Tokyo-direction-to-GA passengers-GA many-Pres
'There are many passengers from this station to the direction of Tokyo.'

Williams (1994) observes that two PPs of a certain class of directional PPs may form a coordinate structure presumably with a null coordinator, as below (see also Jackendoff (1973)).

(ii) [[$_{PP}$ P NP] Ø [$_{PP}$ P NP]]

The PPs in (i) seem to fall precisely into this class, since the order between the two PPs cannot be reversed, as in many instances of asymmetric coordination, and they must be adjacent, as shown by (iii) and (iv), respectively.

(iii) *Tokyo-hoomen-e-ga kono eki-kara-ga zyookyaku-ga oo-i.
Tokyo-direction-to-GA this station-from-GA passengers-GA many-Pres

(iv) *kono eki-kara-ga mainiti Tokyo-hoomen-e-ga zyookyaku-ga oo-i.
this station-from-GA everyday Tokyo-direction-to-GA passengers-GA many-Pres

The reason why both PPs bear *ga* is perhaps because the two PPs can form a coordinate structure, in which both conjuncts are generally realised in the same form.

One may wonder whether an adjunct *ga*-phrase could be analysed as left-dislocated, where it is base-generated in a clause-external position binding a clause-internal *pro*. This would explain the restriction on the number, since no more than one left-dislocated element is usually permitted. However, this approach is unlikely to be correct. Recall from Chapter 2 that a quantifier such as *every* cannot occur in a dislocated position, yet (20) shows that an adjunct *ga*-phrase may appear with such a quantifier. An adjunct *ga*-phrase is therefore not left-dislocated.

(20) kono toori-de-wa
this street-on-Top
subete-no honya-ga [gakusee-ga hon-o yoku ka-u].
every-Gen book.shop-GA student-GA book-Acc often buy-Pres
'On this street, it is at every bookshop that students often buy books.'

The present analysis is able to explain some further properties of this construction, to which I now turn.

3.4 Further properties of an adjunct *ga*-phrase

The proposed account makes four predictions, all of which are direct consequences of the claim that an adjunct *ga*-phrase is not a nominative phrase. I will discuss them in turn. Firstly, the order between an adjunct *ga*-phrase and the subject *ga*-phrase should be fixed: the former should always precede the latter. In principle, it is possible to move the subject into a position higher than the adjunct *ga*-phrase, as shown below.

(21) $[_{TP}$ subject$_i$-ga $[_{TP}$ adjunct-ga $[_{TP}$ t_i $[_{TP}$ VP T]]

However, the derivation should be ruled out for the same reason as the derivation in (19), which contains more than one adjunct *ga*-phrase. Here, *ga* on the adjunct is superfluous. It cannot be identified as a focus marker by the focus generalisation, since it does not appear in an environment the generalisation describes. It cannot function as a case marker either, since the host constituent is not an NP argument. Its presence is therefore not motivated and sentences with the structure in (21) should therefore be

ungrammatical. [13] The prediction is borne out, as the ungrammaticality of (22) illustrates.

(22) *gakusee-ga ano mise-ga hon-o yoku ka-u.
student-GA that shop-GA book-Acc often buy-Pres
'It is at that shop that students often buy books.'

The rigid word order between the two *ga*-phrases is particularly striking considering that a free word order obtains between the two phrases if the adjunct occurs with a postposition, as shown below.

(23) (ano mise-de) gakusee-ga (ano mise-de) hon-o yoku ka-u.
that shop-at student-GA that shop-at book-Acc often buy-Pres
'Students often buy books at that shop.'

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[13] Tateishi (1991:188) cites the following example as grammatical, where the subject *nihonzin-ga* 'Japanese-GA' precedes an adjunct *ga*-phrase *ano ziko-ga* 'that accident-GA'. The quantifier *takusan* 'many' has floated out of the subject.

(i) nihonzin-ga ano ziko-ga takusan sin-da.
Japanese-GA that accident-GA many die-Past

However, the subject seems to be left-dislocated here, as it cannot appear in this position with the quantifier *takusan* 'many', making it non-specific.

(ii) (*takusan-no) nihonzin-ga ano ziko-ga sin-da.
many-Gen Japanese-GA that accident-GA die-Past

Takahashi (1994:399) argues for the same point with the following example.

(iii) ?syokutyuudoku-ga hugu-ga yoku okoru.
food poisoning-GA blowfish-GA often occur-Pres
'It is food poisoning that occurs most frequently with blowfish.'

I have already argued in footnote 9 that the above example is an instance of a possessive multiple nominative construction. Moreover, here too, the first *ga*-phrase appears to be left-dislocated, as *pro* related to it can be spelled out in a position below *hugu-ga* and it cannot be quantified.

(iv) ?(*subete-no syu-no) syokutyuudoku-ga tyoosa-niyoruto
every-Gen kind-Gen food poisoning-GA survey-according.to
hugu-ga (sore-ga) yoku okoru.
blowfish-GA it-GA often occur-Pres
'According to a survey, it is (every kind of) food poisoning that occurs most frequently with blowfish.'

Thus, it seems that the subject cannot precede an adjunct *ga*-phrase, unless the former is left-dislocated.

I assume, for the sake of concreteness, that the two possible orders, [subject-*ga* adjunct] and [adjunct subject-*ga*], are derived by scrambling. The order in which the adjunct follows the subject *ga*-phrase is more natural. It could therefore be the case that when the adjunct appears with *ga*, it moves from the position following the subject rather than base-generated in a position preceding the subject, as the structure in (18) might suggest. I leave this question open.

Secondly, it should be impossible for a possessor of an adjunct *ga*-phrase to be realised with *ga* externally to the adjunct. This property is predicted by both the analysis of the possessive multiple nominative construction developed in Chapter 2 and the account of the adjunct multiple nominative construction proposed in the present chapter. The former predicts that a possessor of a noun may not be realised with *ga* externally to the projection headed by that noun unless that noun also functions as an argument of the verb. On the other hand, the latter prohibits the occurrence of an adjunct *ga*-phrase in environments other than that described by the focus generalisation. A possessive *ga*-phrase would prevent the adjunct *ga*-phrase from appearing as the leftmost *ga*-phrase in the clause. The ungrammaticality of the (a)-examples below demonstrates that the expectations are met. The (b)-examples are grammatical counterparts to the (a)-examples, in which the possessive phrase is realised with the genitive marker *no* internally to the adjunct *ga*-phrases.[14]

(24) a. *John-ga mise-ga gakusee-ga yoku hon-o ka-u
John-GA shop-GA student-GA often book-Acc buy-Pres
Lit.: 'It is John at whose shop students often buy books.'

[14] Morikawa (1993: 35) cites examples such as the following as grammatical, which seems to be a counterexample to the analysis presented in the main text.

(i) Nihon-ga natu-ga kudamono-ga suika-ga uma-i
Japan-GA summer-GA fruit-GA watermelon-GA good-Pres
Lit.: 'It is Japan's summer's fruit among which watermelon is god.'

At present, I have no insightful analysis for this construction. However, it seems that some of the *ga*-phrases such as *nihon-ga* 'Japan-GA' and *natu-ga* 'summer-GA', can be analysed as a functional definite in the sense of Loebner (1985), as suggested by Heycock & Doron (2003). Moreover, the third *ga*-phrase, *kudamono-ga* 'fruit-GA' appears to be functioning as some kind of a topic for the following *ga*-phrase. Korean also exhibits this kind of relation between two adjacent phrases bearing the same case. Some authors (Schütze 1996, 2001, Sim 2004, J. H.-S. Yoon 2004) argue that case markers are used as discourse particles such as topic and focus in these instances.

b. [John-no mise]-ga gakusee-ga yoku hon-o ka-u
John-Gen shop-GA student-GA often book-Acc buy-Pres

(25) a. *hune-ga kono yoona ziko-ga takusan-no hito-ga sin-da
ship-GA this.kind.of accident-GA many-Gen people-GA die-Past
Lit.: '*It is ships that many people died in this kind of accidents.'
b. [kono yoona hune-no ziko]-ga takusan-no hito-ga sin-da
this.kind.of ship-Gen accident-GA many-Gen people-GA die-Past

(26) a. *suugaku-ga siken-mae-ga gakusee-ga tosyokan-de yoku benkyoo-sur-u
maths-GA exam-before-GA student-GA library-in hard study-do-Pres
'It is for maths which the students work hard in the library before the exams.'
b. [suugaku-no siken-mae]-ga gakusee-ga tosyokan-de yoku benkyoo-sur-u
maths-Gen exam-before-GA student-GA library-in hard study-do-Pres

A third prediction concerns the adjunct status of the non-subject *ga*-phrase in the construction under discussion. *Pro* generally functions as an argument. If I am correct in arguing that the non-subject *ga*-phrase is an adjunct rather than an argument bearing nominative case, it should be impossible to move it out of an island in violation of the island condition. Since PP-*pro* does not exist in Japanese (cf. Chapter 2 Section 4), an NP adjunct followed by *ga* should be used to test this prediction. The example in (27a) shows that it is possible for an adjunct *ga*-phrase to be an NP followed by *ga*. There is no appropriate postposition which may attach to the adjunct *kyonen* 'last year' in this example. However, as (27b) shows, the NP adjunct *ga*-phrase *kyonen-ga* 'last year-GA' cannot be related to a position within a relative clause. Unfortunately, it is not possible to test whether a *pro* associated with it can be spelled out. As far as I am aware, adjunct NPs only express time, such as *kesa*, 'this morning' and *kyonen*, 'last year', and there appears to be no appropriate overt form of *pro* referring to time in Japanese.

(27) a. kyonen-ga John-ga gakusee dat-ta
last.year-GA John-GA student be-Past
'It was last year that John was a student.'

b. *kyonen$_j$-ga Mary-wa
last.year-ga Mary-Top
[$_{NP}$ Ø$_i$ [$_{TP}$ e_i t$_j$ gakusee dat-ta] hito$_i$]-o sagasite- iru
student be-Past person-Acc look.for-Prog.
Intended: 'Mary is looking for a person who was a student last year.'

Finally, an adjunct *ga*-phrase, in contrast to a possessive *ga*-phrase, should not have a subject-predicate relation with the clause to its right, since no predication is involved in deriving an adjunct multiple nominative construction. The prediction can be tested by employing the subject-hood tests and predicate-hood tests, which were applied to the possessive multiple nominative constructions in Chapter 2 (Section 2). For independent reasons, however, only one of the subject-hood tests involving the ECM/control construction can be applied. The difficulty with applying the remaining subject-hood tests is that they require the *ga*-phrase in question to refer to a person. Such an example is hard to obtain, since adjuncts do not usually refer to a person.

Nevertheless, if an adjunct *ga*-phrase were licensed by predication, it should be able to appear in the accusative in an ECM/control construction. However, as the ungrammaticality of the following example demonstrates, this is not possible.

(28) John-wa ano ziko-ga/*o takusan-no hito-ga
John-Top that shop-GA /Acc many-Gen people-GA
sinda-to omottei-ru.
die-Past-Comp think.prog-Pres
'John thinks that it is by that accident that many people died.'

By contrast, both of the two predicate-hood tests can be employed. Firstly, if the clause to the right of an adjunct *ga*-phrase were a predicate, it should be possible to conjoin it with another predicate. This results in ungrammaticality, as shown below, suggesting that it is not a predicate. In the following example *kono-eki-kara-ga* 'this station-from-GA' is a PP-subject for the first conjunct and an adjunct *ga*-phrase for the second.

(29) *kono eki-kara-ga [tooku] katu [gakusee-ga yoku Tokyo-e ik-u]
this station-from-GA far-Ger. and student-GA often Tokyo-to go-Pres

Intended: 'From this station (it) is far and [it is from this station that] students often go to Tokyo.'

Secondly, although predicates can usually be modified by a degree adverb, as the ungrammaticality of the example in (30) illustrates, the clause in question cannot be.

(30) *ano ziko-ga hidoku [takusan-no hito-ga asi-o ot-ta].
that accident-GA badly many-Gen people-GA leg-Acc broke-Past
'It was in that accident where many people broke their leg badly.'
cf.: ano ziko-ga takusan-no hito-ga hidoku [asi-o ot-ta].
that accident-GA many-Gen people-GA badly leg-Acc broke-Past

Thus, the fact that an adjunct *ga*-phrase does not behave like a subject according to the test involving an ECM / control construction together with the observation that the clause to its right also does not display any predicate-like properties suffice to show that an adjunct *ga*-phrase is not a subject. The term 'major subject', which is sometimes used to refer to an adjunct *ga*-phrase, is therefore rather misleading.[15]

The properties described in this section demonstrate clearly that an adjunct *ga*-phrase should not be analysed on a par with a possessive *ga*-phrase. The disparity in the behaviour of the two types of *ga*-phrases are particularly problematic for the standard approach, which treats all *ga*-phrases as nominative NPs or DPs. Such properties are listed below.

(31) (i) there can be an indefinitely large number of possessive *ga*-phrases, but only one adjunct *ga*-phrase in a clause (cf. (5)-(8));

[15] There may be one sense in which describing an adjunct *ga*-phrase as a 'subject' is not entirely inaccurate. Heycock & Doron (2003) argue that possessive nominative phrases are subjects of categorical sentences in the sense of Kuroda (1992) and Ladusaw (1998). They state explicitly that this characterisation does not apply to the kind of adjunct *ga*-phrases under discussion. However, I do not see any reason why it should not, assuming that what they consider to be the subject of a categorical sentence corresponds to Kuroda's (1992) object of a categorical judgement. Being the subject of a categorical sentence does not necessarily imply its syntactic subject status. Thus, the characterisation of an adjunct *ga*-phrase as the subject of a categorical sentence and its syntactic status as an adjunct are not in contradiction. This may explain the slightly degraded acceptability of the construction, since it perhaps requires more effort to understand a statement which describes inherent properties of an adjunct.

(ii) a possessive *ga*-phrase can host a floating quantifier but an adjunct *ga*-phrase cannot (cf. (15), (17));

(iii) a possessor of an adjunct *ga*-phrase cannot be realised with *ga* externally to the adjunct, while a possessor of a possessive *ga*-phrase can be realised externally to the possessee (cf. (24)-(26));

(iv) *pro* associated with a possessive *ga*-phrase can be overtly realised, but *pro* associated with an adjunct *ga*-phrase cannot (cf. (27));

(v) a possessive *ga*-phrase has a subject-predicate relation with the clause to its immediate right, but an adjunct *ga*-phrase does not (cf. (28)-(30)).

Instead, I have proposed that unlike a possessive *ga*-phrase, an adjunct *ga*-phrase is not a nominative NP, since adjuncts are not arguments and do not require case. *Ga* on an adjunct can only function as a focus marker. The case features encoded by *ga* attached to an adjunct are therefore never relevant to the syntax and as a result, *ga* on an adjunct must function as a focus marker in order for its presence to be properly motivated. The claim that it does not function as a case marker predicts further that an adjunct *ga*-phrase can be a PP followed by *ga*, which, as I demonstrated, is true.

The above contrasting properties between the two multiple nominative constructions were shown to follow from this difference in the function of the particle *ga* attached to a possessive phrase and an adjunct. In addition, the focus generalisation ensures the obligatory focus of the first *ga*-phrase in both constructions. The rigid word order among *ga*-phrases, a property also shared by the two constructions, is due to different factors. While a possessive nominative phrase must precede its possessee because of the nature of re-association, an adjunct *ga*-phrase must precede the subject because *ga* attached to the phrase can be interpreted as focused only in such a position.

4 Stative Construction

The stative construction is generally accepted as a distinct type from the possessive and adjunct multiple nominative constructions. Subject-hood of the sentence-initial *ga*-phrase and non-subject-hood of the second *ga*-phrase are well documented in the literature (Dubinsky 1993, Perlmutter 1984, Shibatani 1978, Sugioka 1984, Takezawa

1987, Ura 1999, 2000).[16] I shall therefore not concern myself here with argument-hood or the grammatical function of the respective arguments. Instead, I will concentrate on the issue of how the obligatory focus on the subject *ga*-phrase can be explained in terms of the theory of focus proposed in Section 2.

4.1 The categorial status of a subject *ga*-phrase

Some simplex stative predicates in Japanese select their object in the nominative, such as *wakaru* 'understand', *dekiru* 'able to do' and *hituyoo da* 'need', yielding a clause which contains two nominative phrases. Recall that it is possible for the subject of such a predicate to appear either with *ga* or with *ni*, as illustrated below, repeated from (2a) and (11). The subject *John* is obligatorily interpreted with narrow focus if it is marked with *ga*, but not if it is realised with *ni*.

(32) John-ga nihongo-ga wakar-u.
John-GA Japanese-GA understand-Pres
'It is John who understands Japanese.' (Takezawa 1987:24)

(33) John-ni nihongo-ga wakar-u.
John-to Japanese-GA understand-Pres
'John understands Japanese.'

Although the marker *ni* is glossed as a preposition 'to' without any discussion, it is often claimed to be ambiguous between the dative case marker and a postposition. Saito (1982), Takezawa (1987) and Sadakane and Koizumi (1995) argue that *ni* in the above use is indeed a postposition. They reach this conclusion as a result of applying to the subject *ni*-phrase the diagnostic involving a floating quantifier (cf. Section 3.2). An NP followed by a case marker can host a floating quantifier, while an NP followed by a postposition cannot. The following example illustrates that *ni* on the subject is a postposition, as a floating quantifier associated with it is disallowed.

[16] Many authors note that the 'object-hood' of the second *ga*-phrase is difficult to test, as there appears to be no appropriate applicable tests here. In fact only its non-subject status is reported in the literature. However, its non-subject status together with the fact that it is construed as the object of the lexical predicate that follows are taken to be a strong indication of its object-hood. See Shibatani (1990) for discussion on this point.

(34) *kodomotati-ni 3nin eigo-ga wakar-u.
children-to 3-Cl English-GA understand-Pres
'Three children understand English.' (Saito 1982: 82)

This observation suggests that the subject *ga*-phrase of a stative predicate could be analysed on a par with adjunct *ga*-phrases discussed in the previous section. In other words, a subject *ga*-phrase of a stative predicate could have the form PP-*ga*, with the postposition being deleted. This view is supported by the fact that like the postposition *de* on an adjunct, the marker *ni* on the subject can be realised together with *ga*, preferably with another element such as *dake* 'only' intervening, as shown below (cf. (14)).

(35) John-ni-??(dake)-ga nihongo-ga wakar-u.
John-to-only-GA Japanese-GA understand-Pres

Furthermore, when the subject appears with the postposition *ni* alone, it may follow the object *ga*-phrase, just as an adjunct without *ga* may follow the subject *ga*-phrase (cf. (23)).

(36) nihongo-ga John-ni/*ga wakar-u.
Japanese-GA John-to/GA understand-Pres

Despite these similarities, there is one crucial difference between an adjunct *ga*-phrase and the subject *ga*-phrase of a stative predicate. When the latter is realised with *ga* alone, it is able to host a floating quantifier as (37) shows. As we saw above in (15), repeated here as (38), such an option is unavailable to the former.

(37) kodomotati-ga 3nin eigo-ga wakar-u.
children-GA 3-CL English-GA understand-Pres
'Three children understand English.' (Takezawa 1987:120)

(38) *[NP tosyokan]-de/ga 2tu gakusee-ga yoku benkyoo-ga dekir-u.
library-at/GA 2-Cl student-GA well study-GA can-Pres
'It is at two libraries that students can study well.'

Moreover, a subject followed by *ni-dake-ga* does not allow a floating quantifier. Thus, it cannot be that the core of a subject *ga*-phrase is always a PP with a deleted postposition.

(39) *kodomotati-ni-dake-ga 3nin eigo-ga wakar-u.
children-to-only-GA 3-CL English-GA understand-Pres

The behaviour witnessed in (37) is more reminiscent of that of a possessive *ga*-phrase. A possessive phrase also has two possible forms of realisation, either with *ga* or with the genitive marker *no*. When it is marked with *ga*, it can host a floating quantifier (cf. (17)), but not if it is marked with the genitive marker. The following example demonstrates the point.

(40) John-no tomodati-no (*2ri) se-ga taka-i.
John-Gen friends-Gen 2-cl height-GA high-Pres
'It is John whose two friends are tall.'

I propose that when the subject of a stative predicate appears with *ga*, it is ambiguous between an NP followed by *ga* or a PP followed by *ga* with the postposition deleted. More precisely, the subject NP can satisfy the Visibility Condition either with the postposition *ni* or with the nominative case marker *ga*.[17] If it appears with the postposition, it has a further option, like a PP adjunct, of appearing with the marker *ga*, in which case, *ni* can be deleted. This approach explains the above data involving floating quantifiers. Since a subject *ga*-phrase can be either a nominative NP or a PP followed by *ga*, the fact that subject-*ga*, but not subject-*ni-dake-ga*, allows a floating quantifier does not constitute a problem. If *ga* on the subject were invariably a marker for nominative case, it is difficult to see how the above data can be explained.

Regardless of whether the core of the subject *ga*-phrase is an NP or a PP, *ga* attached to this constituent is identified by the focus generalisation in (13) as a focus

[17] The situation observed here suggests that satisfaction of the Visibility Condition in Japanese involves fulfilling somewhat different requirements from what is generally assumed, namely that arguments are visible for θ-marking if it bears Case (Chomsky 1986). The fact that the subject of a stative predicate can appear with the postposition *ni* alone and without any further case marking implies that PP-arguments in Japanese need not carry case.

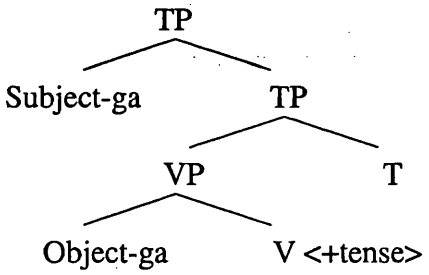
marker. It appears as the leftmost *ga*-phrase in the clause and has the option of being realised in an alternative form, with the postposition *ni*. When the subject is an NP, the obligatory focus interpretation arises in a similar fashion to the first possessive *ga*-phrase. Although its case features are relevant to the syntax, it is also interpreted as a focus marker, because it is licensed in an environment described by the focus generalisation. On the other hand, when the subject *ga*-phrase is a PP, with the postposition *ni* overt or covert, *ga* on this constituent can only be interpreted as a focus marker, as in the case of an adjunct *ga*-phrase, because PPs do not require case.

The ambiguity of the categorial status argued for above explains a number of distributional and interpretational properties of a subject *ga*-phrase, which will be discussed in Section 4.3. Let us first consider the structure of the present construction.

4.2 The structure of a stative construction

The standard assumption that an internal θ-role is assigned before an external θ-role dictates that the object should be merged with the verb first, yielding structures like the following for a stative construction with a simplex verb.[18,19]

(41)



I assume, following Neeleman & Weerman (1999), that tense features can be generated directly on the verb when it is stative, licensing nominative case on the object, as indicated in the above structure. Non-stative predicates, on the other hand,

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[18] Hoshi (2001) also proposes that a nominative object is base-generated as a complement of a tensed head. However, in Hoshi's system a stative verb which assigns nominative case to its object does not project and is directly merged with T, which hosts the tense morpheme. The nominative object is base-generated as a complement of a complex T head in TP. A crucial assumption is that the verb can assign a θ-role after adjoining to another head. Such assumption is not made in the structure in (41).

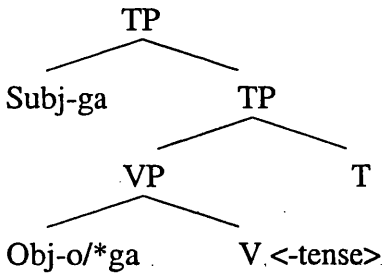
[19] One may wonder where the subject is licensed if it bears the postposition *ni*. I assume for the purpose of this chapter that it is licensed in the same position as the subject *ga*-phrase, namely SpecTP in the structure in (41). However, I will give a re-interpretation of this structure in Chapter 5, in which the relevant position is SpecVP headed by a moved verb.

typically select their object in the accusative or dative and not in the nominative. This is illustrated below.

(42) a. John-ga hon-o/*ga yon-da.
John-GA book-Acc/ GA read-Past
'John read a book.'
b. Mary-ga uma-ni/*ga not-ta
Mary-GA horse-dat/GA ride-Past
'Mary rode a horse.'

Neeleman & Weerman (1999) argue that the contrast is due to the presence of aspectual properties in non-stative sentences and their absence in stative sentences. Non-stative predicates have aspectual properties, since they describe events. Aspect must always occur internal to tense, because the type of an event must be determined before it can be placed in time. This is evidenced in languages which have preverbal tense and aspect particles. The order typically found is tense-aspect-verb rather than aspect-tense-verb. Aspectuality is determined by the combination of verb and object (cf. Tenny 1989, Verkuyl 1993). Thus, tense features cannot be present in VP if the verb is non-stative. One way of implementing this idea is to assume that when the verb is non-stative, tense-features cannot be generated directly on the verb and hence the object cannot bear nominative case.

(43)



On the other hand, stative predicates lack aspectual properties, as they do not describe events. They can be generated with tense features and hence license nominative case on the object, as indicated in the structure in (41).[20]

This view of case-licensing is in accordance with the Elsewhere Condition (Kiparsky 1973). Assuming that nominative case and accusative case are both licensed

[20] In Chapter 5, I will give another possible way of implementing this idea.

structurally by the verb, the former is licensed in a more specific context, namely when tense features are available within the VP containing the verb and the object. The latter is licensed elsewhere. In other words, priority must be given to nominative case over accusative case whenever tense features are present.

Recall that when the subject is followed by the postposition *ni*, the object may either precede or follow the subject (cf. (33) and (36)). As in the adjunct multiple nominative construction, I assume that the two possible orders [subject-*ni* object-*ga*] and [object-*ga* subject-*ni*] are derived by scrambling of the object. Recall furthermore from the example in (36) that it is not possible for an object *ga*-phrase to precede a subject *ga*-phrase. Nothing in the analysis developed above actually prevents this order. Since *ga* on the subject can function as a case marker, it need not always appear as the leftmost *ga*-phrase. I believe that there is a simple explanation for this. The idea is that if two arguments carry the same case marker, it is not possible to distinguish which argument has which grammatical function in relation to the predicate. In general, when the grammatical function of two arguments cannot be determined by their overt forms, either because no rich enough morphological case system closely linked to grammatical functions is available in that language, or because they bear the same morphological case, the ordering between the two constituents tends to be fixed. For example, languages with a relatively rich morphological case system generally allow flexible word order, such as German. However, when the verb selects two arguments with identical case marking, the ordering between the two arguments cannot be reversed. For instance, *lehren* 'to teach' selects its two internal arguments in the accusative. As illustrated below, only one order is possible (cf. Neeleman & Weerman 1999: 80).

(44) a. Jan lehrte die Schüler diese Sprache
Jan taught the pupils-Acc this-Acc language
'Jan taught the pupils this language.'
b. *Jan lehrte diese Sprache die Schüler
Jan taught this-Acc language the pupils-Acc

The approach to the stative construction advocated here together with the focus generalisation makes a number of predictions, which I will examine in the next two sections. The following section deals with predictions related to the distribution and

interpretation of the subject *ga*-phrase, while Section 4.4 is concerned with the possible external realisation of a possessor related to the object of a stative predicate and the repercussions on the interpretation of various *ga*-phrases involved in such a construction.

4.3 Properties of a subject *ga*-phrase

The claim that the core of the subject *ga*-phrase can be an NP and need not always be a PP with a deleted postposition makes three predictions. A first prediction concerns the possibility of extraction out of an island. If the subject *ga*-phrase always had the form PP-*ga*, moving it out of an island should result in ungrammaticality, and it should be impossible to overtly spell out a *pro* related to it. This is because a resumptive *pro* related to a PP does not exist in Japanese (cf. Chapter 2). The prediction can be tested in topicalisation and cleft constructions. In these constructions, it is possible to retain the postposition on the topicalised and clefted constituent, but not the case marker (Koizumi & Sadakane 1995). This allows a subject which appears with *ga* alone to be contrasted with a subject which occurs with *ni*. In other words, if the core of the subject *ga*-phrase were invariably a PP, it should behave like a subject *ni*-phrase. As the contrast between the following examples demonstrates, however, this is not true. The example in (45a) shows that it is possible to topicalise the subject without the postposition *ni*, namely a subject *ga*-phrase whose core is an NP, out of a relative clause and spell out a resumptive *pro* referring to it internally to the relative clause. On the other hand, (45b) illustrates that a subject bearing *ni* cannot undergo the same process. A *pro* associated with *John-ni* is not available, since this phrase is a PP.

(45) a. John$_i$-wa [Ø$_j$ [e_i /(?kare$_i$-ga) e_j wakaru] gaikokugo$_j$]-ga
John-Top he-GA understand foreign.language-GA
nihongo da
Japanese be-Pres
'As for John, the foreign language he understands is Japanese.'

b. *John$_i$-ni-wa [Ø$_j$[e_i e_j wakaru] gaikokugo$_j$]-ga nihongo da
John-to-Top understand foreign.language-GA Japanese be-Pres

A similar observation is obtained in a cleft construction. In (46a), the subject is clefted without any marker. The example illustrates that the subject can be extracted out of a

relative clause and a *pro* associated with it can be realised internal to the relative clause. By contrast, (46b) shows that if the clefted subject bears the postposition *ni*, the same construction is disallowed.

(46) a. [$Ø_j$ [e_i / (?$kare_i$-ga) e_j wakaru] gaikokugo$_j$]-ga
he-GA understand foreign.language-GA
nihongo na no-wa John$_i$ da
Japanese be-Inf Nmz-Top John be-Pres
Lit.: 'The person whose foreign language he understands is John.'

b. *[$Ø_j$ [e_i e_j wakaru] gaikokugo$_j$]-ga
understand foreign.language-GA
nihongo na no-wa John$_i$-ni da
Japanese be-Inf Nmz-Top John-to be-Pres

The fact that a subject without the postposition *ni* does not behave in a parallel fashion to a subject with a marker in the topicalisation and cleft constructions shows that when the subject of a stative predicate appears with *ga*, it is not necessarily a PP followed by *ga* with a deleted postposition. It can also be an NP followed by *ga*.

A second prediction is that an adjunct *ga*-phrase can precede a subject *ga*-phrase in the stative construction. This is because the presence of *ga* on the subject need not be motivated entirely to focus the phrase. If the subject is an NP, its presence is motivated by case reasons too. Thus, even if it appears in an environment other than that described by the focus generalisation, its presence is not superfluous. The following example illustrates that this prediction is borne out.

(47) tosyokan-ga gakusee-ga benkyoo-ga dekir-u
library-GA student-GA study-GA able.to.do-Pres
'It is in the library that students can study.'

Crucially, in the above example, the subject *gakusee* 'student' is not obligatorily interpreted with narrow focus, while the adjunct *ga*-phrase *tosyokan-ga* 'library-GA' is.

Finally, it should be possible for a possessor of a subject to be realised externally to the subject. As in the previous prediction, the claim that *ga* on a subject can be a case marker in the stative construction predicts that it need not appear as the leftmost

ga-phrase. Moreover, re-association of a θ-role with some semantics is possible only if the semantics is contained in an argument. Since the subject *ga*-phrase is an argument, external realisation of a possessor of this subject should be possible. This is indeed true, as shown by the following example.[21] The external possessor *John-ga* is derived in the same manner as other possessive *ga*-phrases examined in Chapter 2.

(48) John-ga imooto-ga nihongo-ga wakar-u
John-GA sister-GA Japanese-GA understand-Pres
'It is John whose sister understands Japanese.'

This property is in stark contrast to the behaviour of the adjunct multiple nominative construction, which disallows an external possessor to be related to an adjunct *ga*-phrase (cf. (24a)).

It is clear that the observed properties of the subject *ga*-phrase can be captured only if the phrase in question can be an NP followed by *ga* and not necessarily a PP

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[21] A further related prediction is that it should be impossible to spell out the postposition *ni* and the particle *ga* together on the subject in the examples in (47) and (48). This is because *ga* is then attached to a PP, in which case it must be interpreted as a focus marker, yet it does not appear in an environment described by the focus generalisation. The prediction is correct, as shown by (i) and (ii).

(i) *tosyokan-ga gakusee-ni-dake-ga benkyoo-ga dekir-u
library-GA student-to-only-GA study-GA able.to.do

(ii) *John-ga imooto-ni-dake-ga nihongo-ga wakar-u
John-GA sister-to-only-GA Japanese-GA understand-Pres

However, there is potentially an independent reason for the ungrammaticality. The subject cannot be marked with *ni* in the presence of an adjunct *ga*-phrase or a possessive *ga*-phrase related to it, as illustrated in (iii) and (iv) respectively.

(iii) *tosyokan-ga gakusee-ni benkyoo-ga dekir-u
library-GA student-to study-GA able.to.do-Pres

(iv) *John-ga imooto-ni nihongo-ga wakar-u (modified from Morikawa 1993: 34)
John-GA sister-to Japanese-GA understand-Pres

I believe the ungrammaticality in (iii) and (iv) is due to the unavailability of tense features to license *ga* on *tosyokan* and *John*. Takezawa (1987) argues that *ni* on the subject is inserted as a last resort, namely when no other case is available. Thus, the fact that *ni* occurs on the subject, but *ga* is present on the object indicates that for some reason, tense features are available only in the lowest VP in these examples and therefore cannot license *ga* on the adjunct or the possessor of the subject. It is therefore difficult to establish what the precise cause of the ungrammaticality is in (i) and (ii).

followed by *ga* on a par with PP adjunct *ga*-phrases. The next section examines the effects of an external possessor of the object in the stative construction.

4.4 An external possessor of an object

I suggested in the concluding remarks in the previous chapter that the reason why a possessor of an accusative object could not be licensed externally in the accusative was because Japanese does not permit multiple occurrences of accusative case in one clause, as opposed to nominative case. If this suggestion is on the right track, external realisation of a possessor of an object should be possible if case other than the accusative is available for the external possessor. Since a tensed head in Japanese can clearly licenses more than one *ga*-phrase in a clause, if the object of a stative predicate appears in the nominative, a possessor of such an object should also be able to appear with *ga* externally to the object. As the following example illustrates, this prediction is correct.

(49) John-ga kono hon-ga naiyoo-ga sappari wakara-na-i
John-GA this book-GA content-GA at all understand-not-Pres
'John does not understand the content of this book at all.'
(modified from Morikawa 1993: 29)

This prediction is borne out in a more striking manner in a stative construction containing a complex predicate. We saw in (2c) that a stative predicate can be derived from a transitive verb by attaching to it the stative morpheme *(r)e*, 'can', forming a complex predicate. The example is repeated here.

(50) Polly-ga nihongo-ga hanas-e-ru
Polly-GA Japanese-GA speak-can-Pres
'It is Polly who can speak Japanese.'

The subject of a complex transitive stative predicate may appear either with *ga* or *ni*, like that of a simplex transitive stative predicate. However, the object may bear accusative case only if the subject appears with *ga*.[22]

[22] There seems to be a consensus among analyses offered in the literature that the case alternation on the object results from different positions in which case is licensed. There are two major schools of

(51) a. Polly-ga/ni nihongo-ga hanas-e-ru.
Polly-GA/to Japanese-Acc speak-can-Pres
b. Polly-ga/*ni nihongo-o hanas-e-ru.
Polly-GA/to Japanese-Acc speak-can-Pres

Although the object can be marked with the accusative case marker *o*, as in (51b), the same predicate is capable of licensing nominative case on the object, as (51a) shows. This predicts that an external possessor of an accusative object should be possible if it is realised with *ga*. The following examples illustrate that this is true.

(52) a. John-ga Mary-ga atama-o tatak-e- ru
John-GA Mary-GA head-Acc hit-can- Pres
'John can hit Mary's head.' (modified from Tada (1992: 99))
b. John-ga Mary-ga musume-o sikar-e-ru
John-GA Mary-GA daughter-Acc scold-can-Pres
'John can scold Mary's daughter.' (modified from Takano (2003: 797))

Thus, the possibility of an external possessor in Japanese is not related to the grammatical function of the possessee argument, but to the availability of case marking on the possessor.

The proposed account of focus makes further predictions with respect to the interpretation of various *ga*-phrases in the examples (49)-(52). Let us first consider the examples without a nominative possessor of the object in (50) and (51). The subject has an option of being realised in two forms only when the object appears in the

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thought in accomplishing this effect. Tada (1992) and Koizumi (1994, 1995, 1998) propose that the object moves to a position higher in the structure for nominative case, while accusative case is licensed by the embedded transitive verb. The other approach assumes ambiguity in the structure. In a bi-clausal structure accusative case can be licensed by the embedded verb, while a mono-clausal structure forces the object to carry nominative case, since such a clause is headed by a complex predicate whose head in turn is the stative morpheme. (Sugioka 1984, Saito & Hoshi 1998, Neeleman & Weerman 1999, Hoshi 2001). However, see Takano (2003) who argues that bi-clausal structure is always involved regardless of the case of the object. Furthermore, the impossibility of the combination of subject-*ni* and object-*o* is often attributed to a constraint proposed initially by Shibatani (1978:65) that a clause in Japanese must contain at least one nominative phrase. Here, I will not discuss the structure of a stative construction with a complex predicate, but rather the interpretation of the *ga*-phrases involved.

nominative, but not when the object occurs in the accusative. The focus generalisation predicts that a subject *ga*-phrase should be focused only when the object appears in the nominative. For *ga* to be identified as a focus marker, the phrase to which it is attached must have an alternative form of realisation. The prediction is correct: *Polly* in (50) must be interpreted with narrow focus, but not in (51b).

A second prediction concerns the interpretation of nominative possessors of the objects in the examples in (49) and (52). Although these phrases can be realised in an alternative form, namely with the genitive marker *no*, it is not the leftmost *ga*-phrase in the clause. As a result, they are not in an environment described by the focus generalisation. It is therefore predicted that they need not be read as focused. The prediction is borne out: *kono hon-ga* 'this book-GA' in (49) and *Mary-ga* in both (52a) and (52b) are not necessarily interpreted with narrow focus.

What is even more significant about the examples in (49) and (52) is that the subject cannot occur with the postposition *ni*, which is readily available in the absence of the external possessor of the object, as we have seen throughout this chapter for examples with a simplex stative predicate (cf. (33), for instance) and in (51a) for an example with a complex predicate). This point is illustrated below.

(53) *John-ni kono hon-ga naiyoo-ga sappari wakara-na-i.
John-to this book-GA content-GA at all understand-not-Pres
'John does not understand the content of this book at all.'

(54) a. *John-ni Mary-ga atama-o tatak-e-ru.
John-to Mary-GA head-Acc hit-can-Pres
'John can hit Mary's head.'
b. *John-ni Mary-ga musume-o sikar-e-ru.
John-to Mary-GA daughter-Acc scold-can-Pres
'John can scold Mary's daughter.'

At present, I have no insightful account of why the postposition becomes unavailable in the presence of a possessive *ga*-phrase. However, the focus generalisation makes a clear prediction. The subject *ga*-phrases in (49) and (52) should not be obligatorily focused, because they have no alternative forms of realisation. This is indeed true, as indicated by the non-use of the cleft construction in the translations.

In sum, the present account of the stative construction as well as its interaction with the analyses proposed for the possessive and adjunct multiple nominative constructions and the focus generalisation accounts for the following properties of the stative construction:

(55) (i) the subject *ga*-phrase of a simplex stative predicate is obligatorily focused;
(ii) the subject *ga*-phrase can be associated with a position internal to an island in topicalisation and cleft constructions, but a subject *ni*-phrase cannot (cf. (45)-(46));
(iii) the adjunct *ga*-phrase can precede the subject *ga*-phrase (cf. (47));
(iv) a possessor of the subject *ga*-phrase can be licensed in the nominative externally to the subject (cf. (48));
(v) a possessor of a nominative object can be licensed in the nominative externally to the object (cf. (49));
(vi) an external possessor of a nominative object need not be interpreted with narrow focus (cf. (49), (52));
(vii) a subject *ga*-phrase is not obligatorily focused in the presence of an external possessor of the object (cf. (49), (52)).

The idea that one interpretational rule, i.e., the focus generalisation, governs the obligatory focus reading of *ga*-phrases in all the three types of multiple nominative construction yields a simple explanation for the various interpretations of *ga*-phrases in the stative construction witnessed in this section, particularly when they interact with other kinds of *ga*-phrases, such as adjunct *ga*-phrases and possessive *ga*-phrases.

Before concluding the chapter, I would like to discuss issues concerning the possibility of accounting for the obligatory focus reading of the first *ga*-phrase in the three constructions as an instance of obligatory focus of *ga*-phrases found in other constructions in Japanese.

5 Focus Generalisation

There is one instance of obligatory focus of a *ga*-phrase which appears problematic for the focus generalisation in (13). When the predicate is an intransitive stative predicate such as an unergative adjective or in a copula construction, the subject *ga*-phrase must

be read with focus, although it is the only *ga*-phrase in the sentence (Kuno, 1973). This is illustrated below in (56). In order to distinguish the type of construction under discussion from the stative construction, which was discussed in the previous section, I will refer to the former as the transitive stative construction and the latter as the intransitive stative construction.

(56) a. John-ga kasiko-i
John-GA smart-Pres
'It is John who is clever.' (Heycock 1993a: 158)

b. John-ga kanemoti des-u.
John-GA rich be-Pres
'It is John who is rich.' (Kuno 1973: 57)

The observed obligatory focus is not predicted by the focus generalisation, because although the phrase in question appears as the leftmost *ga*-phrase in the clause, it does not have an alternative form of realisation. However, there are reasons to believe that the focus in this type of construction is determined by different considerations.

Heycock (1993a) offers an analysis of the obligatory focus in examples such as above in terms of Vallduví's (1992) system of 'information packaging'. Information packaging organises material in a given sentence in terms of three informational primitives, *Focus*, *Link* and *Tail* so that they can be most optimally represented at the level of Information Structure. A sentence is divided into focus and ground, and the latter consists of link and tail, as shown below.

(57) a. Sentence = {Focus, Ground}
b. Ground = {Link, Tail}

The focus denotes the material in the sentence that provides new information. It is the only informative component and therefore must be present in every sentence. The ground, the complement of the focus, denotes relevant information which the speaker assumes is already part of the hearer's knowledge. It may be further divided into link

and tail. The link refers to what is sometimes considered as 'topic'.[23] The link need not be overtly present in the sentence, but must be recoverable from the context. Finally, the tail corresponds to relevant knowledge that is already known about the link.

Heycock (1993a) claims that an argument which is a link must be realised with the particle *wa* in Japanese. Although a precise characterisation of *wa* is an issue of much controversy, it is broadly assumed to be a marker for topic. If a sentence contains a stage-level predicate, the Davidsonian event argument is always available to function as the link. As a result, various parts of the sentence could act as the focus; it could be the object, the subject, the whole sentence and so on.

By contrast, when the predicate is stative, as in (56a), there is no event argument available to be identified as the link. Furthermore, *John-ga* cannot be the link, as it is not realised as a *wa*-phrase. The only possible candidate for the link then is the predicate *kasiko-i* 'clever-Pres'. This forces the subject *John-ga* to function as the focus of the sentence. This is demonstrated below.

(58) [$_{\text{Focus}}$ John-ga] [$_{\text{Link}}$ kasiko-i]
John-GA smart-Pres (Heycock 1993a: 165)

Thus, the analysis proposed by Heycock (1993a) accounts for the obligatory focus of the subject *ga*-phrase in the intransitive stative construction exemplified in (58) and the lack of it in a sentence with a non-stative predicate. Heycock & Doron (2003: 114, fn.10) suggest furthermore that the analysis in terms of information packaging can perhaps be extended to at least the possessive multiple nominative construction. However, as I will discuss in the next section, it is unclear how such an extension can be achieved most straightforwardly. Furthermore, there are contexts in which the *ga*-phrases in the examples in (56) need not be interpreted with narrow focus, which Heycock's (1993a) account captures. However, I will show in Section 5.2 that the first *ga*-phrase in the three multiple nominative constructions do not always display the same behaviour, indicating that the focus reading is indeed determined by different considerations in the latter from the former type of constructions.

[23] Vallduví (1992) describes it as an address pointer. If, adapting Heim's (1983) metaphor, the hearer's knowledge-store consists of file-cards, a link is the address of a file-card. It instructs the hearer on which file-card the new information should be entered.

5.1 Obligatory focus of the first possessive *ga*-phrase

A sentence with a possessive multiple nominative construction contains more elements than a sentence with an intransitive stative predicate, such as (58). Thus, there are more potential candidates which can function as a focus in the former, even if the lexical predicate is stative. As a result, even if the sentence contained only one possessive *ga*-phrase, nothing forces it to act as the focus. For instance, the possessee argument, namely the subject, may be the focus and the predicate the link, leaving the possessive *ga*-phrase to be the tail. The information packaging, as indicated below, would be appropriate in a context where the speaker believes that it is part of the hearer's knowledge that rabbits have some body-part that is long and something that is long has been the issue of the conversation. However, this reading is not available.

(59) [Tail usagi-ga] [Focus mimi-ga] [Link naga-i]
rabbit-GA ear-GA long-Pres

Alternatively, the sentence in (60) can be uttered as an answer to the question 'talking about ears, do rabbits have long ones or short ones?'. The possessee argument, *mimi* 'ears', is marked with *wa*, thereby functioning as the link, and the predicate *naga-i* 'long-Pres' is the focus. As a result, the possessive *ga*-phrase *usagi-ga* 'rabbit-GA' can be the tail, as illustrated below. However, again, a reading in which the possessive nominative phrase is not focused is disallowed in this example.

(60) [Link mimi-wa] [Tail usagi-ga] [Focus naga-i]
rabbit-GA ear-GA long-Pres

The same considerations prevent extension of an account in terms of information packaging to the obligatory focus of an adjunct *ga*-phrase and the subject *ga*-phrase of a transitive stative predicate. Other potential candidates for the focus are present in sentences containing either of the two types of *ga*-phrases. Moreover, the form and the relative positioning of a particular constituent appear irrelevant for information packaging, thus the generalisation that only the left-most *ga*-phrases with an alternative form of realisation is obligatorily focused cannot be captured.

Furthermore, an analysis in terms of information packaging predicts correctly some environments in which the subject *ga*-phrase of an intransitive stative predicate

need not be read as the focus. However, as demonstrated in the next section, the first *ga*-phrases in the multiple nominative constructions are still obligatorily focused in some of the contexts.

5.2 Non-focus environments

There are some environments in which the subject *ga*-phrase of an intransitive stative predicate need not be obligatorily focused, but the focus of the first *ga*-phrase in the three multiple nominative constructions is still obligatory. If the focus of the latter types of *ga*-phrases are to be accounted for in a similar fashion to that of the former type, such disparity would be unexpected. I will discuss two such environments here.[24]

Firstly, when the subject *ga*-phrase of an intransitive stative predicate is modified by a numeral quantifier, it is not obligatorily focused (Kuno 1973). In the following example, a non-focus reading of the subject *ga*-phrase, *3-nin-no gakusee-ga* 'three-Cl-Gen student-GA' is available. In other words, the sentence can be used as all-focus, indicated by the presence of *a* 'oh'.[25]

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[24] There are in fact two further non-focus environments for the subject of an intransitive stative predicate, in which a first possessive *ga*-phrase and the subject *ga*-phrase of a transitive stative predicate need not be focused. A first environment is when the *ga*-phrase in question is preceded by a *wa*-phrase and the other is when it is embedded in an *if*-clause (Kuroda 1986) or complex NP. I refer the reader to Kuno (1973), Kuroda (1986) and Heycock (1993a) for relevant data. At present, I have no insightful explanation as to why the focus generalisation is not operative in these environments for the two kinds of multiple nominative constructions. Note however that the nature of the topic seems to influence whether a non-focus reading becomes available. In (60), for instance, the first possessive *ga*-phrase must still be focused.

By contrast, in both of these environments, an adjunct *ga*-phrase must still be focused, as shown below. This strongly supports the idea advocated in this chapter that the sole motivation for the presence of the particle *ga* on some phrases can be to focus those phrases.

(i) kono miti-wa honya-ga takusan-no gakusee-ga hatarai-tei-ru
this street-Top bookshop-GA many-Gen student-GA work-Prog-Pres
'As for this street, it is at bookshops that many students are working.'

(ii) ?mosi ano mise-ga gakusee-ga yoku hon-o kau-naraba,
if that shop-GA student-GA often book-Acc buy-Cond
'If it is at that shop that students often buy books,...'

[25] This is what Kuno (1973) refers to as a neutral description.

(61) A, [3-nin-no gakusee]-ga kasiko-i
Oh, 3-Cl-Gen student-GA smart-Pres
'Oh, three students are smart.'

Although Heycock (1993a) does not offer an explanation for this observation, it is presumably because the whole sentence can be identified as the focus instead of *gakusee-ga* 'student-GA' alone.

By contrast, the three kinds of multiple nominative constructions cannot be used as all-focus. The first *ga*-phrases in these constructions must receive a narrow focus reading, even if they are modified by a numeral quantifier. The constructions are therefore pragmatically infelicitous in such contexts, as indicated below by #. Sentences without a multiple nominative construction must be used in the given situations.

(62) #A, [3-biki-no usagi]-ga mimi-ga naga-i
Oh 3-Cl-Gen rabbit-GA ear-GA long-Pres
'Oh look, it is three rabbits which have long ears.'

(63) #A, [3-nin-no gakusee]-ga nihongo-ga wakar-u
Oh 3-Cl-Gen student-GA Japanese-GA understand-Pres
'Oh look, it is three students who understand Japanese.'

(64) #A, [3-gen-no mise]-ga gakusee-ga yoku hon-o ka-u
Oh, 3-Cl-Gen shop-GA student-GA often book-Acc buy-Pres
'Oh look, it is at those three shops that students often buy books.'

Another context in which the subject *ga*-phrase of the intransitive stative construction is not necessarily read with narrow focus is when the link is provided by the context. Recall that while the focus must be present in the sentence, the link need not be. It can be recovered from the context, in which case the predicate is no longer required to be the link and can be the focus or the whole sentence can be identified as the focus. As a result, a non-focus reading becomes available for the subject. The following discourse represents such an instance. Here, Heycock argues that A's question provides 'problems with B's new job' as the link for B's answer. The entire

reply by B in turn is identified as the focus. Indeed, the subject *ga*-phrases in B's reply are not obligatorily interpreted with narrow focus.

(65) A: Atarasii sigoto-no mondai-wa nan desu ka?
new work-Gen problem-Top what be Q
'What's the problem with your new job?
B: Ofisu-ga tiisaisi, kyuuryoo-ga yasuisi, uwayaku-ga hidoi desu
office-GA small-and pay-GA low-and boss-GA terribe be
'The office is small, the pay is low, and the boss is terrible.'

It seems, however, that a comparable interpretational pattern does not obtain for the multiple nominative constructions. The use of a multiple nominative construction is again infelicitous in the described situation. In each of the following pair of examples, the questions in (a) provide a link for the replies in (b) containing a multiple nominative construction. Nevertheless, the (b)-examples are pragmatically inappropriate as answers. Some of my informants report that the examples in (67b) (68b) may be used in the given situation, but a narrow focus interpretation of the *ga*-phrases in question is still obligatory.

(66) a. tikyuu-no doobutu-no tokutyoo-wa nan desu ka?
Earth-Gen animal-Gen feature-Top what be Q
'What are the features of animals on Earth?'
(An alien may ask such a question.)
b. #afrika-ga usagi-ga mimi-ga nagaisi,...
Africa-GA rabbit-GA ear-GA long-and
Intended: 'Rabbits in Africa have long ears and...'

(67) a. kono class-no tuyoi ten-wa nan desu ka?
this class-Gen strong point-Top what be Q
'What is the strong point of this class?'
b. #dansee-ga nihongo-ga wakarusi...
men-GA Japanese-GA understand-and
Intended: 'Men understand Japanese and....'

(68) a. kono miti-no tokutyoo-wa nan desu ka?
this street-Gen feature-Top what be Q
'What are the features of this street?'
b. #ano mise-ga gakusee-ga hon-o yoku ka-u
that shop-GA student-GA book-Acc often buy-Pres
Intended: 'Students often buy books at that shop.'

Thus, it is indeed the case that the focus generalisation proposed in this chapter does not account for the obligatory focus of the subject of an intransitive stative predicate. However, the focus in this construction seems to be best accounted for in terms of information packaging, as proposed by Heycock (1993a). Conversely, it seems difficult to extend the analysis based on information packaging to the three types of multiple nominative constructions, since the presence of other overt material than the *ga*-phrase in question and the predicate causes difficulties in always identifying first *ga*-phrase as the focus of the sentence. Moreover, the contrasting interpretation of the *ga*-phrases in question in some environments implies that the focus may be governed by distinct factors in the constructions involved.

6 Concluding Remarks

In this chapter, I have investigated two further kinds of multiple nominative constructions in Japanese, which do not involve re-association. In doing so, I developed a uniform account of the general obligatory focus reading of the first *ga*-phrase in the multiple nominative constructions, including the possessive type. More specifically, I argued that the particle *ga* encodes information related to case as well as focus. It functions as a case marker whenever it is realised on an NP that is assigned a θ-role. It is also independently identified as a focus marker by an interpretational rule, if the phrase to which it is attached appears as the first *ga*-phrase in the clause and has an option to be realised in an alternative form without *ga*. The presence of *ga* is therefore motivated under three circumstances, depending on the nature of the phrase to which it is attached: (i) as a case marker, if the phrase is an NP argument; (ii) as a case marker and a focus marker, if the phrase is an NP argument and appears in an environment described by the focus generalisation; (iii) as a focus marker, if the phrase

does not require case, but appears in an environment described by the focus generalisation.

As a result of this approach, the first *ga*-phrase is analysed differently in each construction. *Ga* on a possessive phrase always functions as a case marker, since a possessive phrase is an NP and receives a θ-role, as argued in the previous chapter. However, it is furthermore interpreted as a focus marker on the first possessive phrase, since the focus generalisation identifies it as such in this environment. By contrast, *ga* on an adjunct can only be a focus marker, as adjuncts do not require case. As a direct consequence, an adjunct *ga*-phrase must invariably appear as the first *ga*-phrase in the clause. This view is in contrast to the standard assumption that adjunct *ga*-phrases are nominative phrases. The proposed analysis captures numerous distinguishing properties of the adjunct multiple nominative construction, which are summarised in Section 3.4. Finally, the subject *ga*-phrase of a transitive stative predicate displays features related to both the first possessive nominative phrase and an adjunct *ga*-phrase. Its categorial status is ambiguous between NP and PP. When it is an NP, it behaves like the first possessive *ga*-phrase in the sense that *ga* realised on it functions as a case marker as well as a focus marker. On the other hand, when it is a PP, *ga* is interpreted only as a focus marker, in a similar fashion to *ga* on an adjunct. The findings related to the stative construction are summarised in Section 4.4. Effects of interaction between the three kinds of multiple nominative constructions on the distribution and interpretation of various *ga*-phrases involved were discussed throughout the chapter.

Finally, it was shown that the obligatory focus of the subject *ga*-phrase of an intransitive stative predicate does not follow from the proposed interpretational rule, but that it is determined by different considerations. I argued that an analysis that accounts for the focus reading in the intransitive stative construction cannot be carried over most straightforwardly to the multiple nominative constructions. I demonstrated furthermore that the interpretation of the first *ga*-phrase in the three multiple nominative constructions cannot always be identified with that of the subject *ga*-phrase of an intransitive stative predicate.

The two multiple nominative constructions were investigated as two types of constructions distinct from the possessive type discussed in Chapter 2. The next chapter will examine another kind of construction which contrasts with the possessive multiple nominative construction from another perspective. Effects of the grammatical

function of the possessee argument will be investigated in the possessive multiple accusative construction, in which a possessor of an accusative object, as opposed to a nominative subject, is licensed externally to the object.

Chapter 4

External Possession in Korean

1 Introduction

We observed in the previous chapter that in Japanese, the external possessor of an accusative object is permitted only under specific circumstances, namely when the predicate is a complex stative predicate and it can appear only in the nominative. However, Korean, a language with remarkably similar syntax to Japanese, allows a possessor of an accusative object to be licensed externally in the accusative, as illustrated below. In each of the examples, the first accusative phrase is interpreted as a possessor of the following accusative phrase. Thus, in (1a) for instance, *John-ul* is the possessor of *tali-lul* 'leg-Acc'.[1]

(1) a. Mary-ka John-ul tali-lul cha-ss-ta
Mary-Nom John-Acc leg-Acc kick-Past-Decl
'Mary kicked John's leg.' (Cho 1992: 15)

b. Nay-ka Yumi-lul paym-ul ayli-ess-ta
I-Nom Yumi-Acc cheeck-Acc hit-Past-Decl
'I hit Yumi on the cheek.' (Maling & Kim 1992: 48)

c. John-i namu-lul kaci-lul cal-ass-ta
John-Nom tree-Acc branch-Acc cut-Past-Decl
'John cut the tree on the branch' (Yeon 1999: 221)

A possessive accusative phrase shares a number of properties with a possessive nominative phrase. It may be separated from its possessee argument by an adverbial, indicating that it is licensed syntactically as an independent constituent at the clausal level, as shown below by (2) for the example in (1). It may be alternatively marked with the genitive case marker *uy* and be realised internally to the projection of the possessee argument. Its NP-internal position is illustrated in (3) by the impossibility of

[1] The accusative marker is realised as *lul* if following a vowel and as *ul* elsewhere. Similarly, the nominative case marker is realised as *ka* after a vowel and as *i* elsewhere.

inserting an adverbial between the two accusative phrases. Finally, a clause may contain an indefinitely large number of possessive accusative phrases. Recall from Chapter 2 that possessive nominative phrases also display all these properties.

(2) Mary-ka John-ul ecey tali-lul cha-ss-ta
Mary-Nom John-Acc yesterday leg-Acc kick-Past-Decl

(3) Mary-ka [John-uy (*ecey) tali]-lul cha-ss-ta
Mary-Nom John-Gen yesterday leg-Acc kick-Past-Decl

(4) Mary-ka John-ul tali-lul olunccok-ul cha-ss-ta
Mary-Nom John-Acc leg-Acc right.side-Acc kick-Past-Decl
'Mary kicked the right side of John's leg.'

Given the above syntactic similarities between possessive accusative phrases and possessive nominative phrases, it seems that the operation of re-association can be carried over to the possessive multiple accusative construction straightforwardly. In this chapter, I will argue that this is indeed the case. However, there is one crucial difference between the two types of possessive phrases. It is often observed that the external possessor of an object must be interpreted as 'affected' by the action described by the verb, and its possession relation to the object must be inalienable (J. H.-S. Yoon 1989, 1990). The implied affected reading is often psychological in nature when the possessor is animate. On the other hand, no comparable restrictions apply to the external possessor of a subject. The point is illustrated by the contrast in the grammaticality of the following pairs of examples. The ungrammaticality of the (a)-examples is usually attributed to the fact that the external possessor is not an inalienable possessor of the possessee or cannot be interpreted as affected by the eventuality the rest of the sentence describes. The (b)-examples, which contain an external possessor of a subject with the same possession relation, are grammatical.

(5) a. *Mary-ka John-ul cha-lul cha-ss-ta
Mary-Nom John-Acc car-Acc kick-Past-Decl
'Mary kicked John's car.' (Yoon 1990: 503)

b. John-i cha-ka khu-ta
John-Nom car-Nom big-Decl
'John's car is big.'

(6) a. *John-i Mary-lul moksoli-lul tul-ess-ta
John-Nom Mary-Acc voice-Acc hear-Past-Decl
'John heard Mary's voice.' (Yeon 1999: 219)
b. Mary-ka moksoli-ka kop-ta
Mary-Nom voice-Nom beautiful-Decl
'Mary's voice is beautiful.'

It is important to note that the term 'affected' should not be confused with the semantic notion of 'affectedness', which is often used to explain the distribution of direct objects in clauses as well as within DPs headed by argument-taking nouns (cf. Anderson (to appear) and references cited therein). In semantics, affected objects have the effect of delimiting, or binding in time, the event described by the verb (Tenny 1987). As a consequence, a sentence containing an affected object can be modified by *in* adverbials, which indicates that the event has an endpoint, but not by *for* adverbials, which independently delimits the event expressed by the verb (Dowty 1979, Vendler 1967). However, an external possessor of an accusative object is not affected in this aspectual sense, as illustrated by the following examples. It is possible to modify a sentence containing a possessive accusative phrase by a *for* adverbial, but not by an *in* adverbial. An external possessor of an object is therefore interpreted as 'affected' not in the aspectual sense, but in a more psychological sense, akin to notions such as inconvenience, misfortune or adversity.

(7) a. Mary-ka han-si-gan-dongan John-lul tali-lul cha-ess-ta.
Mary-nom one.hour.for John-acc leg-acc kicked
'Mary kicked John's leg for an hour.'
b. *Mary-ka han-si-gan-e John-lul tali-lul cha-ess-ta.
Mary-nom one.hour.in John-acc leg-acc kicked
'Mary kicked John's leg in an hour.'

A number of analyses have been proposed in the literature for the Korean possessive multiple accusative construction. However, the majority of them are primarily concerned with providing an explanation for the external possessor's syntactic status as an argument at the clausal level and its interpretation as a possessor of another argument. As far as I am aware, no studies have examined the possible connection between the phenomenon of external possession, on the one hand, and the 'affected' reading and its absence when the possessee is a subject, on the other. The interpretation is simply stated as an independent constraint on the well-formedness of the possessive multiple accusative construction (Y.-J. Kim 1989, J. H.-S. Yoon 1989, 1990, Maling & Kim 1992, D.-I. Cho 1992, 1993, J.-M. Yoon 1997, S. Cho 1998, 2000).

In this chapter, I will first demonstrate that a possessive accusative phrase in Korean is licensed by the same operation as a possessive nominative phrase in Japanese, namely by re-association. It will be shown that application of re-association is not affected by the grammatical function of the possessee argument. The proposed approach makes a number of correct predictions concerning various properties of the construction, including object-hood of the external possessor and the possessee.

I will then argue that the 'affected' reading is a consequence of the operation of re-association applying to an internal argument of the verb. θ-roles in a verb's θ-grid are generally considered to be participants in the eventuality expressed by the verb.[2] The semantics associated with the θ-roles usually provide information concerning the arguments' participation in the eventuality. An external possessor of an object receives a re-associated θ-role which is contained in the verb's θ-grid. It must therefore be construed as a participant in the eventuality. However, the semantics associated with the re-associated θ-role does not contain any relevant information as to how the recipient of the θ-role should participate in the eventuality, since it is not part of the lexical meaning of the verb. I propose that this integration of the external possessor into the eventuality results in what is generally referred to as the 'affected' interpretation. Considering that it must be part of the eventuality, it seems only natural that it is somehow affected by it. I argue furthermore that an external possessor need not be in an inalienable possession relation with the object, contrary to a widely held

[2] I use the term 'eventuality' throughout this chapter in the sense of Bach (1981, 1986), namely as encompassing all aspectual types, including states. Implications of the use of this term are discussed in Section 3.

view. It is a tendency, rather than an absolute requirement, following from the idea that an external possessor must be part of the eventuality and hence affected.

The absence of an obligatory affected interpretation of an external possessor of a subject is a consequence of the manner in which the distinction between internal θ-roles and external θ-roles are represented in the syntax. Following Neeleman & van de Koot (2002), I assume that it is represented by the idea that the verb's θ-grid is not copied up beyond the verb's maximal projection. An external θ-role is copied up on its own and is no longer in the verb's θ-grid when it is assigned to the subject. As a result, the re-associated θ-role assigned to an external possessor of the subject is not part of the verb's θ-grid. It therefore need not be interpreted as a participant in the eventuality and does not receive an 'affected' reading.

The chapter is organised as follows. The following section demonstrates that re-association is indeed involved in licensing an external possessor of an accusative object in Korean. Predictions made by the present analysis are also shown to be correct in this section. The 'affected' interpretation is examined in detail in Section 3. Section 4 considers some alternative approaches offered in the literature and compares them with the proposed analysis. Concluding remarks are noted in Section 5.

2 The Licensing of a Possessive Accusative Phrase

2.1 The presence of *pro*

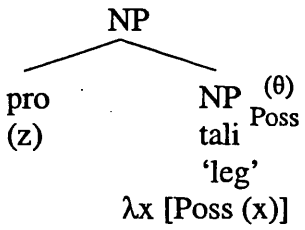
The similarities in the distribution between a possessive accusative phrase and a possessive nominative phrase observed above in (2)-(4) suggest that the two types of external possessors are licensed by the same operation, namely re-association. As discussed in detail in Chapters 1 and 2, however, the presence of a resumptive *pro* in the possessee argument is crucial in the possible application of the operation. This is because its presence makes available semantics that are appropriate for re-association. Recall that licensing of an argument involves two processes: θ-role assignment under sisterhood and replacement of the variable in the associated semantics. In the present study, θ-roles are considered to be labels for syntactic selectional requirements on arguments, such as categorial features. Assigning a θ-role to an argument therefore corresponds to satisfaction of the syntactic conditions of a θ-role by an argument under sisterhood. When an argument meets the requirements of a particular θ-role, it must also replace the variable contained in the semantics associated with that θ-role.

I assume that a possessor of a noun is assigned a θ-role with the associated semantics *Possessor* by the noun it modifies. Thus, the possessee NP *tali* 'leg' in (1a) has a θ-role in its argument structure, as shown below.

(8) *tali* (θ)
'leg' Poss

A *pro* is a legitimate syntactic object, which can function as a syntactic argument. As a result, it can satisfy the selectional conditions of the θ-role of the NP *tali* 'leg' under sisterhood. However, *pro* is a variable in the semantics. It therefore leaves the semantics associated with that θ-role still containing a variable. The relevant syntactic structure and its semantic counterpart are illustrated by (9a) and (9b), respectively. The *pro* is represented as the variable *(z)*. The resultant semantics, shown in (9b), is appropriate for re-association, because it contains a variable and is of a kind that can function as an argument in the lexical conceptual structure of a predicate.

(9) a.



b. λx [Possessor (x)] (z) → Possessor (z)

It turns out that a possessee object in Korean does contain a *pro* associated with its external possessor (cf. Cho 1992, 1993), as it is possible to realise it overtly, as illustrated by the following examples which correspond to those in (1).[3]

[3] Kitahara (1993) reports similar examples to those in (10) as ungrammatical. D.-I. Cho (1992, 1993) notes however that the acceptability of the example with an overt *pro* improves if the possessor is scrambled away from the *pro*, as (i) shows for (10a), and attributes the effect to Avoid Pronoun Principle (Chomsky 1981). Since some speakers find the examples in question grammatical, including some of my informants, I assume with Cho that the possibility of overtly realising it is subject to idiolectal variation.

(i) John$_i$-ul Mary-ka [ku$_i$-uy tali]-ul cha-ss-ta
John-Acc Mary-Nom he-Gen leg-Acc kick-Past-Decl (Cho 1992: 19)

(10) a. ?Mary-ka John$_i$-ul [(ku$_i$-uy)tali]-ul cha-ss-ta
Mary-Nom John-Acc he-Gen leg-Acc kick-Past –Decl (Cho 1992: 19)
b. ?Nay-ka Yumi$_i$-lul [(ku$_i$-uy)paym]-ul ayli-ess-ta
I-Nom Yumi-Acc he-Gen cheeck-Acc hit-Past-Decl
c. ?John-i namu$_i$-lul [(kukek$_i$-uy) kaci]-lul cal-ass-ta
John-Nom tree-Acc it-Gen branch-Acc cut-Past-Decl

Like Japanese, Korean is a radical *pro*-drop language. An argument need not be overtly realised, if its content can be recovered from the context, as the examples in (11) demonstrate, where *e* indicates a gap (cf. Lee 1983).

(11) a. *e* phathi-e ka-ess-ta
party-to go-Past-Decl
'I/you/he/she/we/they went to a party.'
b. *e e* sa-ess-ta
buy-Past-Decl
'I/you/he/she/we/they bought it/them.'

Moreover, a resumptive *pro* strategy of the type in Japanese observed in Chapter 2 is also available in Korean. A topic or a relativised NP can be associated with a position in an island and a *pro* associated with the displaced element can be spelled out, as exemplified below.

(12) *Topicalisation*
John$_i$-un [$_{NP}$ [$_{CP}$ Ø$_j$ [$_{TP}$ (ku$_i$-ka) e$_j$ kaluch-n]] haksayng$_j$-tul]-i motwu
John-Top he-Nom teach-Rel students-Nom all
sihem-ey hapkyekhay-ss-ta
exam-in succeeded-Past-Decl
Lit.: 'As for John, all the students (he) taught passed the exam'

(13) *Relativisation*

[NP Øi [TP[NP Øj [TP(kui-ka) ej kaluchi-n] haksayngj-tul]-i motwu sihem-ey
he-Nom teach-Rel students-Nom all exam-in
hapkyekha-n] Johni
succeed-Rel John (Y.-S. Kang 1986: 225)
Lit.: 'John, who all the students (he) taught passed the exam.'

However, crucially, it is not the case that the island conditions do not hold in Korean. As in Japanese, the displaced element cannot be a PP. The point is illustrated by the ungrammaticality of the following example, where the topic is a PP and is associated with a position internal to an island. The example also serves to illustrate the absence of PP-*pro* in Korean.

(14) *[PP pwusan-eyse]j-nun [TP [NP Øi [TP ei tj o-n] haksayng]-i motwu
Pwusan-from-Top came-Rel student-Nom all
sihem-ey hapkyekhay-ss-ta]
exam-in succeeded-Past-Decl
Lit.: 'As for from Pusan, all students (from there) passed the exam.'

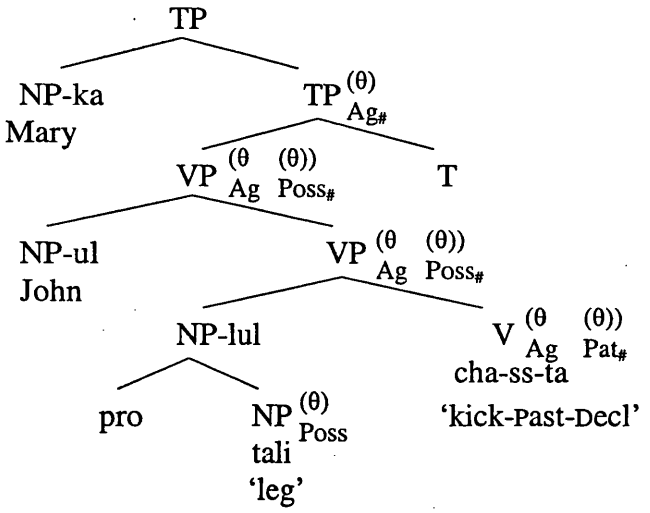
Thus, it seems that when a possessor of an object appears externally, a *pro* related to the external possessor is indeed present internally to the object, allowing an analysis of the possessive multiple nominative construction in terms of re-association, to which I now turn.

2.2 Re-association

The presence of *pro* in the object suggests that the external possessor is licensed by re-association in an identical fashion to an external possessor of a subject. Specifically, the θ-role which is assigned to the NP headed by the object can be dissociated from its semantics and be re-associated with the variable containing semantics, *Possessor*, present in the NP. The re-associated θ-role is subsequently assigned to the external possessor. The example in (1) therefore has representations like the following.[4]

[4] As I briefly noted in the introduction to this chapter, I will argue in connection with the affected reading that the verb's θ-grid is not copied beyond the maximal projection of the verb. Here I will simply assume this and defer discussion of the issue until Section 3.

(15)



In the above structure the possessee object *tali-lul* is licensed as an internal argument of the verb in an ordinary fashion: it is assigned an internal θ-role by the verb and its semantics replaces the variable contained in the associated semantics, *Patient*. The external possessor of the object *John-ul*, 'John-Acc' is base-generated in an adjoined position to VP.[5] It is licensed syntactically as an internal argument of the verb, since the verb assigns it an internal θ-role. At the same time, however, it is construed as a semantic argument of the object, as the semantics associated with the re-associated θ-role is part of the lexical meaning of the object.

In terms of semantics, re-association is an operation that introduces a lambda operator. The variable *z* in the resultant semantics in (9b) can therefore be bound by a newly introduced lambda operator, as shown in (16a). This yields a formula that can be applied to the possessive accusative phrase, as (16b) illustrates.

(16) a. Re-association: Possessor (z) → λz [Possessor (z)]

b. λz [Possessor (z)] (john) → Possessor (john)

Since re-association is potentially a recursive operation, the NP headed by *tali* 'leg' could be an external possessor of another argument. This explains the possibility of an indefinite number of possessive accusative phrases, as we saw in (4). The proposed account makes further correct predictions. Considering that an external

[5] I assume here without any discussion that a verb can license multiple occurrences of accusative case within its own maximal projection VP, as opposed to licensing each instance of the case in distinct maximal projections. This issue is discussed in Chapter 5, where I will come to the conclusion that the structure in (14) is indeed correct for multiple accusative case licensing.

possessor and a possessee both receive an internal θ-role from the verb, they should behave like an object. I will discuss predictions concerning object-hood of the accusative phrases in the next subsection. In the remainder of this subsection, I will consider two predictions related to other properties of the construction.

Firstly, recall that a θ-role may be re-associated only with semantics contained in the argument which is assigned the θ-role. The definition of re-association is repeated below from Chapter 1.

(17) *Re-association*

A θ-role can be re-associated with appropriate semantics contained in an argument that satisfies it.

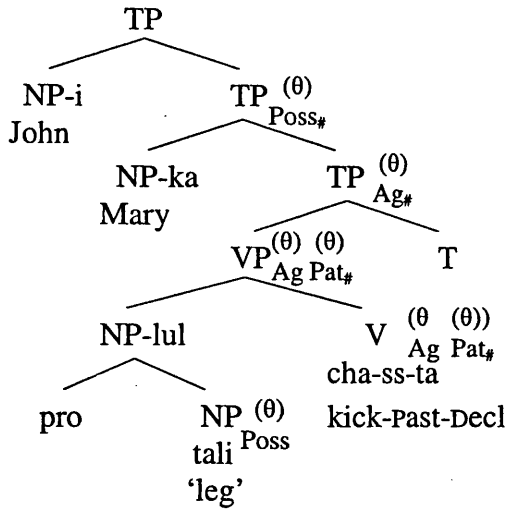
It should therefore be impossible, for example, for a θ-role assigned to an argument other than the direct object to undergo re-association with semantics present in the direct object. For instance, one prediction is that an external possessor of a direct object cannot be base-generated in a position above a subject and be licensed as an external argument of the verb. Similarly, it should be impossible to base-generate a possessor of a direct object above an indirect object and license it syntactically as an indirect object. Both of these instances involve re-association of a θ-role with semantics which is not part of the argument to which the θ-role is assigned. As the ungrammaticality of the examples in (18) shows, this prediction is correct. *John-i* 'John-Nom' and *ai-eykey* 'child-Dat' are intended to be understood as external possessors of the direct objects *tali-lul* 'leg-Acc' and *phal-ul* 'arm-Acc', respectively. The structure in (19) demonstrates this illegal instance of re-association for (18a).

(18) a. *John-i Mary-ka tali-ul cha-ss-ta
John-Nom Mary-Nom leg-Acc kick-Past-Decl
'Mary kicked John's leg.'

b. *Mary-nun ai-eykey uisa-eykey phal-ul kalikhi-ess-ta
Mary-Top child-Dat doctor-Dat arm-Acc show-Past-Decl
'Mary showed the child's arm to the doctor.'

cf. Mary-nun uisa-eykey ai-lul phal-ul kalikhi-ess-ta
Mary-Top doctor-Dat child-Acc arm-Acc show-Past-Decl

(19) *



Secondly, re-association makes no reference to the grammatical function of the possessee nor to the case of the constituents involved. The operation should therefore be able to apply to any argument as long as case is available for the external possessor. In particular, it should be possible to license a possessor of an indirect object externally, if an additional instance of dative case is permitted by the language. Since an indirect object is an argument and receives a θ-role from the verb, there appears to be no reason why its θ-role cannot be re-associated with semantics contained in that argument. The prediction is borne out. As the following example shows, a possessor of the indirect object, *Yumi* here, can be marked with the dative marker *eykey* and appear externally to the indirect object, *phal-ey* 'arm-Dat'.[6]

(20) Nay-ka Yumi-eykey (ecey) phal-ey cwusa-lul noh-ass-ta
I-Nom Yumi-Dat yesterday arm-Dat shot-Acc give-Past-Decl
'I gave Yumi a shot in the arm.' (modified from Maling & Kim 1992: 42)

In fact, an external possessor should be able to bear any case that the language makes available. The indirect object of some ditransitive verbs in Korean can be realised in dative case as well as accusative case, as shown by (21).

(21) Nay-ka Yumi-eykey/lul cwusa-lul noh-ass-ta
I-Nom Yumi-Dat/Acc shot-Acc give-Past-Decl
'I gave Yumi a shot.' (Maling & Kim 1992: 42)

[6] The dative marker is realised as *eykey* if the referent of the NP it marks is animate and as *ey* if inanimate.

Thus, it is predicted that an external possessor of an indirect object and the indirect object may agree or differ in the case they bear, which is true.[7] In (21) above and (22a) below, the possessor and the possessee agree in case, while in (22b) and (22c), they are marked with different cases. This demonstrates clearly that re-association is indeed independent of what case the possessee or the external possessor bears.

(22) a. Nay-ka Yumi-lul phal-ul cwusa-lul noh-ass-ta (Acc-Acc, Acc)
I-Nom Yumi-Acc arm-Acc shot-Acc give-Past-Decl
b. Nay-ka Yumi-lul phal-ey cwusa-lul noh-ass-ta (Acc-Dat, Acc)
I-Nom Yumi-Acc arm-Dat shot-Acc give-Past-Decl
c. Nay-ka Yumi-eykey phal-ul cwusa-lul noh-ass-ta (Dat-Acc, Acc)
I-Nom Yumi-Dat arm-Acc shot-Acc give-Past-Decl

(Maling & Kim 1992: 42)

Let us now turn to predictions related to object-hood of the possessee direct object and its external possessor.

2.3 Object-hood of the external possessor and the possessee

The proposed analysis predicts that both the external possessor and the possessee should display properties related to object, since they are each assigned an internal θ-role by the verb. Here, I discuss six pieces of evidence suggesting that the prediction is correct. Firstly, only nominative or accusative arguments can host a floating quantifier in Korean (cf. Shibatani 1977b, Gerdts 1987, Hong 1990). The examples in (23) demonstrate that both an external possessor and a possessee can host a floating quantifier, clearly indicating their syntactic status as an argument (Chun 1986, O'Grady 1991, Yeon 1999). In (23a), the floating quantifier *seys-ul* 'three-Acc' is related to the possessive accusative phrase *haksayng-ul* 'student-Acc', while in (23b), it refers to the possessee *tali-lul* 'leg-Acc'.

[7] As in the Japanese stative construction with complex predicates, where the object can appear either with accusative or nominative case, it may be that a different structure is involved depending on which case the indirect object carries. Thus, it may not be entirely accurate to predict that the external possessor and the indirect object may differ in case from the observation in (20). However, the important point is the fact that they can differ in case, as in (21b-c), shows that, where different case is available, the external possessor need not agree in case with its possessee.

(23) a. Kay-ka haksayng-ul seys-ul tali-lul mul-ess-ta
dog-Nom student-Acc three-Acc leg-Acc bite-Past-Decl
'the dog bit three students on the leg.' (O'Grady 1991: 71)

b. John-un kemi-lul tali-lul seys-ul ppop-ass-ta
John-Top spider-Acc leg-Acc 3-Acc pull.out-Past-Decl
'John pulled out three of a spider's legs.'

A second prediction concerns resultatives. Resultatives in Korean, like in many other languages, are object-oriented (cf. Simpson 1983, Kim & Maling 1997, Wechsler & Noh 2001). Both external possessor and a possessee should thus be able to act as the subject of a resultative predicate. This is indeed true. In (24a), the external possessor *Mary-lul* is interpreted as becoming pretty as a result of having her hair cut, while in (24b), the possessee *tali-lul* 'leg-Acc' rather than any other part of John's body, is understood to have become bruised as a result of Mary's kicking it.

(24) a. John-un Mary-lul yeppu-key meli-lul kkak-ass-ta
John-Top Mary-Acc pretty-Comp hair-Acc cut-Past-Decl
'John cut Mary's hair pretty.'

b. Mary-ka John-ul tali-lul mengtul-key cha-ess-ta
Mary-Nom John-Acc leg-Acc bruised kick-Past-Decl
'Mary kicked John's leg until the leg is bruised.'

Thirdly, if the external possessor is licensed as an object of the verb, it should be able to function simultaneously as an external possessor and a thematically selected direct object in a coordinate construction. In other words, it should be possible to coordinate its possessee and the verb with another transitive verb. As the following example shows this is indeed true.

(25) John-un Mary-lul yeppu-key [meli-lul kkak-(ass)]-ko [iphi-ess-ta]]
John-Top Mary-Acc pretty-Comp hair-Acc cut-Past -and dress-Past-Decl
'John cut Mary's hair and dressed her and as a result Mary looks pretty'

In the above example, the resultative is inserted in order to ensure that the coordination does not have a structure like the following, where the direct object in the second

conjunct is realised as *pro*, referring to the external possessor in the first conjunct. Recall that Korean is a radical *pro*-drop language, allowing such analysis of the sentence.

(26) John-un [Mary-lul meli-lul kkak-(ass)]-ko [pro iphi-ess-ta]]
John-Top Mary-Acc hair-Acc cut-Past -and dress-Past-Decl

The presence of the resultative *yeppu-key* 'pretty-Comp' in (25) allows a reading where Mary becomes pretty as a result of both John's cutting her hair and his dressing her. This reading ensures that *Mary-lul* is licensed as the direct object of the verb in the second conjunct, *iphi-ess-ta* 'dress-Past-Decl'. Indeed, this reading is available for the example.

Fourthly, internal arguments are generally thematically selected by the verb. This is because the θ-roles assigned to them are usually associated with semantics which is part of the lexical meaning of the verb. The possessee should therefore be thematically selected by the verb. By contrast, the semantics associated with the θ-role assigned to an external possessor is not part of the lexical meaning of the verb. Thus, the verb should not thematically select an external possessor. One prediction that follows from such considerations is that the semantic/pragmatic relation between the external possessor and the verb need not be identical to that between the possessee and the verb. As Maling & Kim (1992) observe, this is indeed true. (27a) does not entail that the hen is plucked. Similarly, in (28a), it is the hair that is cut and not Yenghi. That the thematic selection indeed holds only for the possessee is demonstrated by the ungrammatical (b)-examples, in which the possessee argument is omitted. It was noted in Chapter 2 that this characteristic was true of the possessive multiple nominative construction too.

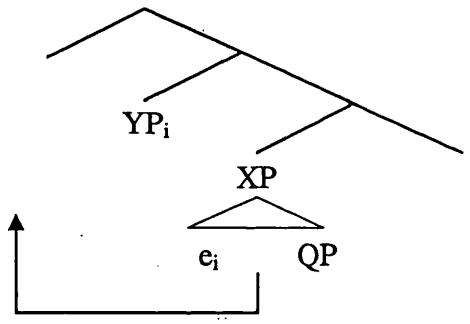
(27) a. Cheli-nun talk-ul thel-ul ppop-ass-ta
Cheli-Top chicken-Acc feather-Acc pull.out-Past-Decl
'Cheli pulled out the chicken's feather.'

b. *Cheli-nun talk-ul ppop-ass-ta
Cheli-Top chicken-Acc pull.out-Past-Decl (Maling & Kim 1992: 58)

(28) a. Cheli-nun Yenghi-lul meli-lul kkak-ass-ta
Cheli-Top Yenghi-Acc hair-Acc cut-Past-Decl
'Cheli cut Yenghi's hair.'
b. *Cheli-nun Yenghi-lul kkak-ass-ta
Cheli-Top Yenghi-Acc cut-Past-Decl (modified from J. H.-S. Yoon 2001: 5)

A fifth prediction involves passivisation. It is a typical property of objects that they can be passivised. The present analysis predicts that an external possessor and a possessee show contrasting behaviour with respect to this operation due to independent factors concerning the nature of movement and the constituents involved. Barrs (1986) observes that if a constituent containing a gap moves to a position higher than the antecedent of the gap, the antecedent cannot be interpreted in the gap position for its scopal construal. In other words, in the following structure, YP cannot be interpreted as being in the scope of QP, if XP is fronted (cf. also Boeckx 2001, Sauerland & Elbourne 2002, van de Koot 2004)[8].

(29)



The following pair of examples illustrates this point. *Some young lady* corresponds to YP in the above structure and *every senator* to QP in XP. In (30a), the constituent containing *every senator* is not moved. *Some young lady*, which is moved out of this constituent, can be interpreted in its base position for scope, as it can take narrow scope with respect to the universal quantifier. In (30b), on the other hand, the constituent containing *every senator* is moved to a position higher than *some young lady* and the indefinite can no longer be in the scope of the universal.

[8] The authors vary significantly in explaining Barrs's generalisation. For the purpose of the discussion in the main text, however, it is only necessary that the generalisation is true. I will therefore not examine the proposed analyses here.

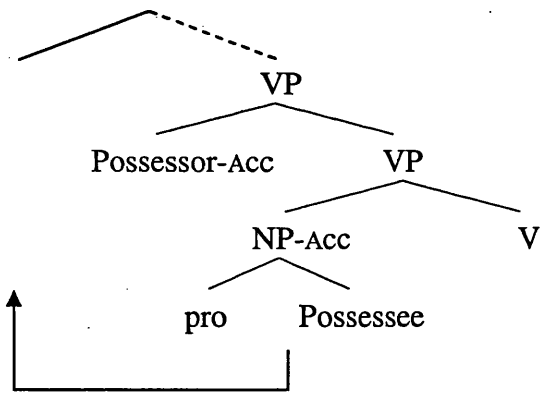
(30) a. [$_{VP}$ Some young lady]$_i$ seems [t_i to be likely [$_{XP}$ t_i to dance with every senator]]
some > every; every>some

b. [$_{XP}$ How likely t_i to dance with every senator]$_j$ does [$_{VP}$ some young lady]$_i$ seem to be t_j?
some > every; *every>some

Sauerland & Elbourne (2002) show that this generalisation is true also for binding of a binomial *each* by a plural antecedent and licensing of Negative Polarity Items.

Returning to the Korean multiple accusative construction, the structure I have proposed in (15) is equivalent to that in (29). A possessee contains a *pro*, a gap, which is related to a position external to the maximal projection that contains it. Thus, if a possessee is passivised, it is not possible to access *pro* in the possessee's base position for the interpretation of the external possessor. Consequently, the information that the possessee's θ-role is assigned to an item which is a variable in the semantics is unavailable in the possessee's base-position. The θ-role assigned to the possessee should therefore not be able to undergo re-association with appropriate semantics to provide a θ-role for the external possessor, rendering the derivation to crash, as illustrated below.

(31) *



On the other hand, no such gap is present in the external possessor and hence its passivisation should be possible. The predictions are borne out. An external possessor can be passivised, as (32a) shows, while a possessee cannot undergo the same operation, as demonstrated by (32b) (Kang 1986, Kim 1989, Yeon 1999).

(32) a. Mary$_i$-ka John-hanthey t_i son-ul puthcap-hi-ess-ta
Mary-Nom John-by hand-Acc catch-pass-Past-Decl
'Mary was caught by the hand by John.'

b. *son$_i$-i John-hanthey Mary-lul t_i puthcap-hi-ess-ta
hand-Nom John-by Mary-Acc catch-pass-Past-Decl
Lit.: 'The hand was caught Mary by John.' (Kang 1986: 102)

In fact, the above observed contrast should not be limited to passivisation, but should also obtain for other movement operations, since the trigger for the movement of the possessee makes no difference for the configuration in (31). As the following examples illustrate, this prediction is correct for topicalisation, relativisation and scrambling. The (a)-examples involve movement of an external possessor, while the ungrammatical (b)-examples illustrate the same movement by a possessee (Kang 1986, Kim 1989, H. J.-S. Yoon 1989, 1990, J.-M. Yoon 1997, Yeon 1999).[9]

(33) *Topicalisation*

a. Haksayng-un kay-ka tali-lul mul-ess-ta
student-Top dog-Nom leg-Acc bite-Past-Decl
'The dog bit the student on the leg.'

b. *tali-un kay-ka haksayng-ul mul-ess-ta
leg-Top dog-Nom student-Acc bite-Past-Decl (Yeon 1999: 214-15)

(34) *Relativisation*

a. [$_{CP}$ Ø$_i$ [$_{TP}$ Chelswu-ka e_i kaci-lul cal-un] namwu
Chelswu-Nom branch-Acc cut-Comp tree
'The tree that Chelswu cut the branches of'

b. *[$_{CP}$ Ø$_i$ [$_{TP}$ Chelswu-ka namwu-lul e_i cal-un] kaci[10]
Chelswu-Nom tree-Acc cut-Comp branch
Lit.: 'The branch that Chelswu cut from the tree.' (J.-M. Yoon 1997: 246)

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[9] A nominative possessee in Japanese also displays a similar distributional behaviour. It cannot be relativised or scrambled, as (i) and (ii) show, respectively. However, for reasons unknown to me, it may undergo topicalisation, as in (iii).

(i) *[usagi-ga nagai] mimi (ii) *mimi-ga usagi-ga nagai (iii) mimi-wa usagi-ga nagai
rabbit-GA long ear ear-GA rabbit-GA long ear-Top rabbit-GA long

[10] Tomioka & Sim (to appear) claim that a similar example to (33b) is grammatical. However, all my informants find relativisation of a possessee ungrammatical in accordance with the general consensus in the literature. I will therefore assume here that it is ungrammatical.

(35) *Scrambling*

a. John$_i$-ul Mary-ka t_i tali-ul cha-ss-ta
John-Acc Mary-Nom leg-Acc kick-Past-Decl

b.* tali$_i$-lul Mary-ka John-ul t_i cha-ss-ta
leg-Acc Mary-Nom John-Acc kick-Past-Decl

(cf. J. H.-S. Yoon 1990: 505)

Some researchers have concluded from these observations that the external possessor is an argument of the verb and that the possessee is not (Kim 1989, O'Grady 1991).[11] However, considering that the possessee does behave like an object in being able to host a floating quantifier (cf.(23b)), act as the subject of a resultative predicate (cf. (24b)) and be thematically selected by the verb (cf. (27)-(28)), this conclusion seems unlikely to be correct.

Finally, the presence of a variable within the projection headed by a possessee has the effect that the possessee cannot be referential. This is because part of its reference is determined by an element external to the possessee's projection. It is generally not possible for a non-referential expressions to be modified by an appositive adjective (Vergnaud & Zubizarreta 1992 and references cited there). Accordingly, modification of a possessee with an appositive adjective should be disallowed, which is true, as the ungrammaticality of the example in (36a) shows. An external possessor, on the contrary, contains no such variable, hence should be able to tolerate such modification, which is also true, as the example in (36b) illustrates (cf. Y.-J. Kim 1989, J. H.-S. Yoon 1989, 1990, J.-M. Yoon 1997).

(36) a. *? Chelswu-ka Yenghi-lul [yeppun elkwul]-ul chi-ess-ta
Chelswu-Nom Yenghi-Acc pretty face-Acc hit-Past-Decl
'Chelswu hit Yenghi's face, which is pretty.' (J.-M. Yoon 1997: 246)

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[11] The topicalisation and the relativisation data such as (33a) and (34a) are often employed to demonstrate object-hood of the external possessor. However, it is unclear to me why the possibility of relativisation and topicalisation determine argument-hood of a particular constituent. Non-arguments may be relativised and topicalised, as shown by (i) and (ii) respectively. (cf. H.-M. Sohn 1994: 68, 192)

(i) [$_{NP}$ [$_{CP}$ Ø$_i$ [$_{TP}$ nay-ka e_i kongpwuhan-un]] tosekwani] (ii) cikum-un motwu-ka pappu-ta
I-Nom study-comp library now-Top all-Nom busy-Decl
'The library where I study.' 'Now, everybody is busy.'

b. Yumi-ka [chakhan Inho]-lul meli-lul ttayli-ess-ta
Yumi-Nom kind Inno-Acc head-Acc hit-Past
'Yumi hit Inho, who is kind, on the head.' (Y.-J. Kim 1989: 451)

In sum, re-association allows a uniform account of external possession, regardless of the grammatical function of the possessee. In addition to capturing numerous properties of possessive nominative phrases, which were discussed in Chapter 2, the present analysis captures a number of properties of the external possessor of an object, including its syntactic, but not semantic, status as an internal argument of the verb. The literature offers some alternative approaches to accounting for some of the properties observed in this section. They are discussed and compared with the present analysis in Section 4. In the next section, I will demonstrate that the obligatory affected reading associated with an external possessor of an object and the lack of such reading for an external possessor of a subject follows from the present analysis.

3 Affectedness

3.1 (The absence of) the affected reading

As observed in the introduction to this chapter, the external possessor of an object is interpreted as 'affected'. I propose that this reading of the external possessor of an object is a consequence of the manner in which language represents information related to participants of the eventuality expressed by the verb. I will first discuss how the affected reading arises for an external possessor of an object and subsequently why no such interpretation obtains for an external possessor of a subject.

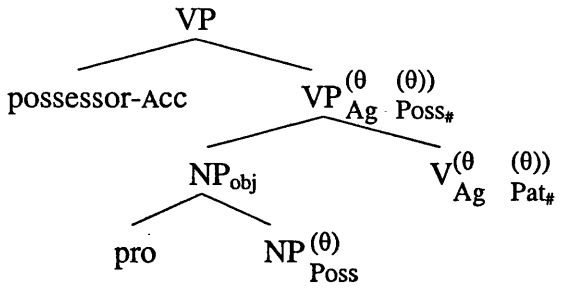
θ-roles in a verb's θ-grid are generally considered to correspond to participants in the eventuality expressed by the verb. The semantics associated with θ-roles provide instructions as to how the recipient of the θ-roles participate in the eventuality. Thus, in the following sentence, *John's dog* and *Mary's hamster* are construed as participants in an eating event, since the verb *eat* has a θ-grid as indicated in (37b), and the θ-roles are assigned to these constituents. They are furthermore interpreted as *Agent* and *Theme* in the eventuality, respectively, as instructed by the associated semantics. *John* and *Mary* are not understood as participants, because they do not receive a θ-role from the verb.

(37) a. John's dog ate Mary's hamster.

b. eat (θ (θ))
Ag Th

An external possessor of an object is assigned a re-associated θ-role, which is contained in the verb's θ-grid. (38) represents a relevant part of the structure.

(38)



As a consequence, the external possessor must be understood as a participant in the eventuality expressed by the verb. However, in the above structure, the semantics of the re-associated θ-role is not part of the lexical meaning of the verb, but of the possessee argument. It therefore provides no relevant information concerning the possessor's participation in the eventuality. I propose that the affected reading obtains for the external possessor under such a circumstance due to pragmatics. Considering that it must be part of the eventuality, in the absence of any specific instruction, it seems only natural that it is interpreted as somehow involved in the eventuality, and hence 'affected' by it. In other words, the external realisation of a possessor of an object is a linguistic representation of the speaker's view of the world in which the possessor is part of the eventuality expressed by the rest of the sentence.

Whether or how an external possessor can be conceived of as being part of the eventuality varies depending on the speaker's concept of an eventuality. 'Affected' is a vague interpretation related to our knowledge of the world and should not be defined in terms of grammatical, well-defined semantic roles, such as *Affected*, as has been proposed on several occasions (cf. Borer & Grodzinsky 1986, Authier & Reed 1992, Tomioka & Sim to appear). Relevant factors influencing the likelihood of an external possessor's integration into an eventuality seem to include notions such as inalienability, cognitive contiguity and adversity (cf. Shibatani 1994, Yeon 1999).

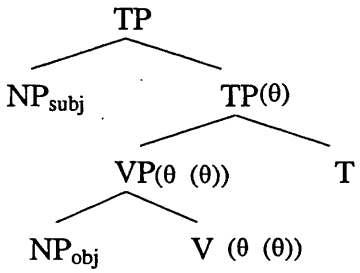
The adversity reading generally associated with an external possessor therefore is not inherent in the construction. Nothing in the assumption that an external possessor must be part of the eventuality, forces it to be also interpreted as *adversely* affected by

the eventuality. Instead, it results from the nature of the eventuality of which the possessor is part and our knowledge of the world. If the eventuality involves kicking one's leg, pragmatic considerations would dictate that the simplest way in which the possessor of the leg can be conceived of as being part of the eventuality is by being adversely affected by it. I will illustrate in the next subsection that given appropriate lexical items, a 'positively affected' reading is possible for an external possessor of an object. Similarly, the inalienable possession relation implied in most instances of the possessive multiple accusative construction is not inherent in the construction. It is a consequence of the fact that the external possessor must be a participant in the eventuality. If someone is part of a *kicking-a-leg* event, and is construed as a possessor of *leg*, it seems most natural to interpret that person as an inalienable possessor of *leg*. I will also show in the next subsection that the observed inalienable possession relation is indeed not absolute, but merely a tendency.

Why then are external possessors of a subject not affected? Since they are also assigned a re-associated θ-role by the verb, it appears that a comparable restriction on the interpretation should hold for such possessors. I propose that the contrast follows from an independent property of language, namely the necessity to distinguish external θ-roles from internal θ-roles.

Since at least Williams (1980), external θ-roles have been distinguished from internal θ-roles in various ways. The distinction is necessary, because external arguments and internal arguments display fundamentally different properties (cf. Marantz 1984, Grimshaw 1990, Kratzer 1996). One such property is that a predicate may license multiple internal arguments, but no more than one external argument. Neeleman & van de Koot (2002) argue that the distinction can be represented by the idea that the verb's θ-grid is not copied up beyond the verb's maximal projection. An external θ-role is copied up on its own without any information related to the internal organisation of the θ-grid. This proposal explains, among other properties, the uniqueness of the external θ-role and the externality of the external argument. Modifying their notation slightly, the point can be illustrated as below.

(39)



Although the external θ-role is not part of the verb's θ-grid when it is assigned to the subject, the subject is still interpreted as a participant in the eventuality expressed by the verb. This is because the semantics associated with the θ-role is part of the lexical meaning of the verb. It thus gives information as to how the subject participates in the eventuality. However, in licensing an external possessor of a subject, the external θ-role undergoes re-association with semantics present in the subject. In other words, the re-associated θ-role, which the external possessor of a subject receives, is no longer in the verb's θ-grid and the associated semantics does not provide relevant information concerning its participation in the eventuality. Consequently, it need not be construed as a participant in the eventuality and hence receive an affected reading.

Thus, the contrast in the interpretation of an external possessor of an object and that of a subject is a consequence of an independent property of language. The approach advocated here has implications for what kinds of interpretations are available for an external possessor. I now turn to this issue.

3.2 Possible interpretations of an external possessor

The proposed approach to (the absence of) the affected reading of an external possessor makes four predictions, particularly in relation to the range of possible interpretations an external possessor of an object may receive. Firstly, the claim that the adversity reading results from the nature of the eventuality involved and our knowledge of the world predicts that given appropriate lexical items, an external possessor of an object may be positively affected or not be psychologically affected at all. This prediction is borne out. Thus, in (40), Mary is readily understood to be positively affected by the doctor curing her arm, while in (41), since a shovel is an inanimate entity, there is no sense in which it is psychologically affected.

(40) uisa-ka Mary-lul phal-ul kochi-ess-ta
doctor-Nom Mary-Acc arm-Acc cure-Past-Decl
'The doctor cured Mary's arm.'

(41) Chelswu-ka sap-ul caru-lul cap-ass-ta
Chelswu-Nom shovel-Acc handle-Acc grab-Past-Decl
'Chelswu grabbed the handle of the shovel.' (Tomioka & Sim to appear : 1)

Secondly, the present approach predicts that as long as the external possessor can be construed as part of the eventuality, its possession relation with the object need not be inalienable, contrary to what is widely assumed. Indeed, inalienable possession seems to be a strong tendency rather than an absolute requirement. The example in (42) is acceptable as long as Swuni is wearing the dress, thereby being conceived of as being part of the eventuality expressed by the verb. Yeon (1999) notes that the contrast in (43) reflects our knowledge of the world in that it is easier to perceive Mary being part of a scolding event if her only son is the patient than if her teacher is the patient.

(42) Cheli-ka Swuni-lul chimacalak-ul pwutcap-ass-ta
Cheli-Nom Swuni-Acc dress.train-Acc catch-Past-Decl
'Cheli caught the train of the dress that Swuni is wearing.' (J. H.-S. Yoon 2001: 6)

(43) John-i Mary-lul ?sensayng-ul / oyatul-ul ttayli-ess-ta
John-Nom Mary-Acc teacher-Acc / only son-Acc hit-Past-Decl
'John hit Mary's teacher / only son.' (Yeon 1999: 225)

On the other hand, no such interpretational restriction obtains for the external possessor of a subject. In (44), Swuni need not be wearing the dress and in (45), the possessee can be *sensayng* 'teacher' or *oyatul* 'only son', without any effects on the acceptability.

(44) Swuni-ka chimacalak-i kil-ta
Swuni-Nom dress.train-Nom long-Decl
'It is Swuni whose train of the dress is long.'

(45) Mary-ka sensayng-i / oyatul-ka cwuk-ess-ta
Mary-Nom teacher-Nom / only son-Nom die-Past-Decl
'It is Mary whose teacher / only son died.'

A third prediction is that licensing an external possessor of an object is almost impossible if the predicate is stative. This is because stative sentences describe a relation among participants which holds true during the period of time specified by the context. It is extremely difficult to introduce a new participant into such a situation. The ungrammaticality of the following example illustrates that this is indeed true.

(46) *Chelswu-ka Yenghi-lul elkwul-ul cohaha-n-ta
Chelswu-Nom Yenghi-Acc face-Acc like-Pres-Decl
'Chelswu likes Yenghi's face.' (J.-M. Yoon 1997: 250)

Nevertheless, if an external possessor can be construed as being a participant in a stative situation expressed by the sentence, the acceptability improves drastically, as (47) shows. Liking someone's personality is usually synonymous with liking that person. Thus, the possessor of the personality can be readily interpreted as part of the state. By contrast, in (46) above, it is difficult to interpret Yenghi being part of Chelswu's liking Yenghi's face.

(47) Nay-ka Swuni-lul sengkyek-ul coaha-n-ta
I-Top Swuni-Acc personality-Acc like-Pres-Decl
'I like Swuni's personality.' (Choo 1994: 129)

Finally, the proposed analysis correctly predicts the well-known observation that the acceptability of an external possessor of an object is subject to great variation among speakers, particularly when the predicate is of 'low impact', such as *see* and *draw*, like the following. Whether the external possessor can be part of an eventuality depends on the speaker's view of the eventuality.

(48) Chelswu-ka Yenghi-lul elkul-ul po-ass-ta
Chelswu-Nom Yenghi-Acc face-Acc see-Past-Decl
'Chelswu saw Yenghi's face.' (J.-M. Yoon 1997: 250)

Importantly, there is a general consensus that if an adverbial is inserted, which makes it easier for the possessor to be construed as being part of the eventuality, the acceptability improves. Thus, the above sentence sounds much more acceptable with the insertion of adverbials such as *ttwulecikey* 'hard', as illustrated below.

(49) Chelswu-ka Yenghi-lul elkul-ul ttwulecikey po-ass-ta
Chelswu-Nom Yenghi-Acc face-Acc hard see-Past-Decl
'Chelswu looked at Yenghi's face hard [enough to make a hole in it].'
(modified from J.-M. Yoon 1997: 252)

In sum, the affected interpretation for an external possessor of an object arises, because this constituent is assigned an internal θ-role by the verb, but lacks any specific instruction on its participation in the eventuality. The most natural manner in which a speaker can construe such an argument as being part of an eventuality is if it is affected by the eventuality. The proposed account correctly predicts the pragmatic influence on the possibility of various interpretations of an external possessor of an object. The absence of a comparable reading for an external possessor of a subject is a consequence of the necessity to distinguish external θ-roles from internal θ-roles. The θ-role which is assigned to an external possessor of a subject is not part of the verb's θ-grid and hence it need not be interpreted as part of the eventuality.

Before concluding this chapter, the next section examines several alternative analyses to both licensing an external possessor of an object and to its affected reading.

4 Alternative Analyses

4.1 Alternative approaches to the licensing an accusative external possessor

The literature offers three different approaches to the syntax of the possessive multiple accusative construction in Korean. I will discuss them in turn. Firstly, as in the case of Japanese, there have been attempts to explain the construction in terms of possessor raising, where an accusative possessor originates within the DP headed by the

possessee and moves to a position where its accusative Case can be assigned / checked (Kitahara 1993, S. Cho 1998, 2000),[12] as illustrated below.

(50) [$_{VP}$ possessor$_i$-Acc [$_{VP}$ [$_{DP}$ t_i possessee] -Acc V]

In contrast to the proposal for the possessive multiple nominative construction, the posited movement is not out of a subject and therefore does not violate the island conditions. However, there are reasons to reject this approach. Most notably, J. H.-S. Yoon (2001) and Tomioka & Sim (to appear) observe that certain idiomatic expressions are possible only when the possessor appears in the accusative. While idiomatic readings are sometimes lost under movement, they are not generally obtained as a result of movement. Moreover, the movement is still from a case position to a case position, which is generally prohibited (D.-I. Cho 1992, 1993). A movement approach appears therefore unlikely to be correct.

A second alternative analysis is in terms of θ-identification in the sense of Higginbotham (1985) (J. H.-S. Yoon 1989, 1990, Maling & Kim 1992, O'Grady 2002). According to Higginbotham (1985), θ-role assignment is achieved by two separate processes: a verb θ-marks an argument and the argument in turn θ-binds the relevant position in the verb's argument structure. Verbs θ-mark only saturated arguments, which contain no unassigned θ-role in its θ-grid. However, a possessee argument contains an unassigned θ-role, because its argument, the possessor, is realised externally. As a consequence, the proponents of this alternative approach claim, a possessee argument is unsaturated and cannot be assigned a θ-role by the verb. Under such a circumstance, the unassigned θ-role in the possessee's θ-grid and that in the verb's θ-grid can be 'identified', with the effect that the recipient of the identified θ-role is interpreted as a semantic argument of both the verb and the possessee.

This approach captures the intuition that the possessee and the verb form some kind of a complex predicate and takes an external possessor as its argument. Since the identified θ-role is assigned by the verb, it follows that the external possessor behaves

[12] The authors differ in the precise position in which accusative Case is assigned / checked. Kitahara (1993) argues that accusative Case on the possessor can be assigned in SpecDP, although it may subsequently move out of DP for reasons other than Case. S. Cho (1998, 2000) proposes that the relevant positions for accusative Case checking are SpecAgrOP and SpecvP for the external possessor and the possessee, respectively.

like an object of the verb and through θ-identification, its semantic relation with the possessee is accounted for. Moreover, unsaturated arguments are non-referential. It is general properties of non-referential elements that they do not tolerate appositive modification and cannot undergo movement operations, explaining some of the properties observed in Section 2.3 (cf. (32)-(36)). However, according to this analysis, an external possessor has the same semantic/pragmatic relation to the verb as the possessee does to the verb.[13] As we saw in (27) and (28), this is not true.

A third alternative also involves a thematic operation, according to which the possessee's θ-role for the external possessor is inherited by the verb's θ-grid (D.-I. Cho 1992, 1993, J.-M. Yoon 1997).[14] J.-M. Yoon implements this idea in terms of Higginbotham's system of θ role assignment. He assimilates the thematic operation to Function Composition, which is advanced in much work in Categorial Grammar and also in Di Sciullo & Williams (1987) and Williams (1994), in the sense that the verb combines with the possessee and they form a complex predicate which licenses the external possessor as its complement. This approach is very similar to the proposed account in that the verb thematically selects the possessee and the possessor is assigned a θ-role whose semantics is part of the lexical meaning of the possessee.

The selectional restriction by the verb on the possessee argument alone is therefore explained. The observations concerning the impossibility of moving the possessee and modifying it with an appositive adjective are also captured by virtue of its unsaturated status, as in the θ-identification approach above. However, J.-M. Yoon (1997) claims explicitly that a *pro* cannot be present in the possessee, as it would render the possessee referential. However, as we saw in Section 2.1, it is possible to overtly realised a *pro* associated with an external possessor. J.-M. Yoon's claim therefore seems untenable. Moreover, this approach makes some incorrect predictions concerning the general characteristics of the possessor and the possessee. Firstly, it should be possible for a possessee to be an adjunct. Nothing appears to prevent an

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[13] Maling & Kim (1992) propose a complex manner in which the possessor and the possessee are assigned θ-roles in terms of θ-marking, θ-binding and θ-identification. However, the end result still seems to imply that the possessor and the possessee have the same thematic relation to the verb, since they together θ-bind the open position in the verb's θ-grid.

[14] D.-I. Cho's (1992, 1993) analysis is not quite as specific as J.-M. Yoon's (1997) about how an external possessor is assigned a θ-role. The former simply states that a θ-role contained by the possessee is 'compositionally' assigned to the external possessor by the possessee and the verb.

unassigned θ-role contained in an adjunct to be inherited by the verb's θ-grid. As in Japanese, the prediction is not borne out, as the example in (51) shows.

(51) *Mary-ka cip-i/ul/ey/eyse cipwung-eyse John-ul cha-ss-ta
Mary-Nom house-Nom /Acc/Dat/on roof-on John-Acc kick-Past-Decl
Intended: 'Mary kicked John on the roof of the house.'

A second prediction is that the external possessor can be a PP, since there is no categorial restriction on the recipient of the θ-role that is inherited. It is difficult to test this prediction if the possessee is an object, since the external possessor must be construed as 'affected'. It does not make sense to talk of a PP being 'affected', because PPs generally refer to concepts related to space or time. Instead, assuming that the same operation derives an external possessor of a subject, the prediction can be tested with a possessive multiple nominative construction. We saw in Chapter 2, that PPs cannot be licensed as an external possessor of a subject in Japanese. The relevant example is repeated.

(52) *Tokyo-kara-ga zyosee-ga yoku wara-u
Tokyo-from-ga woman-ga often laugh-pres
Lit.: '*It is from Tokyo that women often laugh.'

Recall that the ungrammaticality of the above example is a consequence of the general absence of PP-*pro* in Japanese. The presence of *pro* provides the semantics appropriate for re-association. Thus, if there is no PP-*pro*, a re-associated θ-role cannot be derived for an external possessor which is a PP. We already observed that in Korean too, there is no *pro* related to PP. Thus, the prediction is that a PP cannot be related to a position internal to a subject.

(53) *Barcelona-eyse-ka sanay-ka cwuk-ess-ta
Barcelona-from-Nom man-Nom die-Past-Decl
Intended: 'A man from Barcelona died.'

Finally, it should be possible for more than one semantic argument of the possessee to be licensed externally. This is because nothing in the operation appears to

prevent more than one θ-role of the possessee being inherited by the verb's θ-grid. However, again, it seems impossible to test this prediction with the possessive multiple accusative construction. It is extremely difficult to obtain an example in which two accusative possessive phrases are independently interpreted as possessors of the same possessee argument and as participants in the eventuality described by the rest of the sentence. On the other hand, the prediction can be tested with a possessive multiple nominative construction, as an external possessor of a subject is not constrained by a comparable restriction on its interpretation. We saw in Chapter 2 that this prediction is not borne out in Japanese. The same observation is obtained in Korean. (54a) shows that it is possible to license two semantic arguments of the deverbal noun *phakoy* 'destruction' NP-internally. (54b) and (54c) each demonstrate that the two arguments may be realised externally individually. However, as (54d) illustrates, it is not possible to license the two semantic arguments externally to the subject simultaneously.

(54) a. Roma-in-tul-uy tosi-uy phakoy-ka mwuseu-ess-ta
Rome-people-Pl-Gen city-Gen destruction-Nom terrible-Past-Decl
'The Roman's destruction of the city was terrible.'

b. Roma-in-tul-i tosi-uy phakoy-ka mwuseu-ess-ta
Rome-people-Pl-Nom city-Gen destruction-Nom terrible-Past-Decl

c. tosi-ka (*Roma-in-tul-uy) phakoy-ka mwuseu-ess-ta[15]
city-Nom Rome-people-Pl-Gen destruction-Nom terrible-Past-Decl

d. *Roma-in-tul-i tosi-ka phakoy-ka mwuseu-ess-ta
Rome-people-Pl-Nom city-Nom destruction-Nom terrible-Past-Decl

In the proposed account, the effect follows from the idea that a θ-role assigned to the possessee argument undergoes re-association with appropriate semantics contained in the possessee argument. Consequently, even if there is more than one semantics

[15] Unlike Japanese, it is not possible to realise the agent of the deverbal noun NP-internally, if the theme of the same deverbal noun is realised externally. This is perhaps due to the fact that it violates the order in which θ-roles must be assigned: a theme θ-role is usually assigned prior to an agent θ-role, since the latter is more prominent than the former in Grimshaw's (1990) terms. However, the main point of the example is that it is possible to license the theme argument externally to the projection headed by the deverbal noun.

available for re-association, in the absence of an appropriate number of dissociated θ-roles in the verb's θ-grid, re-association is not possible.

One common feature that all the three alternative analyses share is that the affected interpretation of an external possessor of an object is postulated as a separate constraint on the construction. As we saw above, there are numerous similarities between an external possessor of a subject and that of an object, inviting a uniform analysis of the two types of possessive phrases. If the two types of possessive phrases are derived by the same thematic operation, it is strange that only one type is subject to a restriction on its interpretation.

4.2 An alternative approach to affectedness

Tomioka & Sim (to appear) propose an alternative approach, in which a phonologically null verb, *v*, with the semantic meaning 'affect' is posited.[16] This functional head is located above VP containing the possessee and the lexical verb. An external possessor is base-generated in the specifier position of this functional head and receives an affected θ-role from the functional head. VP and vP each represent an event.[17] The event corresponding to VP is a material part of the event represented by vP. Thus, in sentences such as (1), the *kicking-the-leg* event is a material part of the *affecting-John* event. In other words, (1) is interpreted as 'Mary affected John by kicking the leg.' This alternative appears to be similar to the proposed approach in that it integrates the external possessor as a participant in the event expressed by the sentence. However, a general problem with this kind of decompositional approach is that it predicts that the two events can be modified separately. As the following example illustrates, it is not possible to modify the *affecting* event independently from the *kicking-the-leg* event. The fact that such modification does not result in semantic anomaly is shown by the grammaticality of the English translation.

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[16] Pylkkänen (2002) discusses the affectedness and possession interpretation in an external possession construction in Hebrew and offers a similar analysis to Tomioka & Sim's (to appear), in which an external possessor is licensed in a functional projection whose head denotes the meaning 'source'.

[17] For Tomioka & Sim (to appear), the crucial notion is 'event' rather than 'eventuality' in the sense that states are excluded (Changyong Sim, p.c.). This assumption is problematic, as external possessors of objects are allowed in stative sentences, as we saw in Section 3.2.

(55) *Mary-ka ppalli John-ul seoseohi tali-lul cha-ss-ta
Mary-Nom quickly John-Acc slowly leg-Acc kick-Past-Decl
Intended: 'Mary quickly annoyed John by slowly kicking his leg.'

Moreover, the semantic content of the functional head seems to be arbitrary. It is unclear why it should be *affected*, rather than, for instance, *seen*, yielding an interpretation in which John was seen by Mary while she was kicking his leg.

In addition, the authors claim that the tendency for the inalienable possession relation is due to pragmatic factors. However, it is unclear how this property follows from the proposal. No *pro* is postulated internal to the possessee's projection. One can conceive of a variety of ways in which an argument can be affected by the event described by the lower VP without the affected argument being an inalienable possessor of the object of the lexical verb. In particular, the proposal would incorrectly predict that examples like the following is grammatical, where John is understood to be affected by Mary kicking Bill's leg.

(56) *Mary-ka John-ul Bill-uy tali-lul cha-ss-ta
Mary-Nom John-Acc Bill-Gen leg-Acc kick-Past-Decl
Intended: 'Mary affected John by kicking Bill's leg.'

Finally, the absence of a comparable reading for an external possessor of a subject is difficult to explain on this approach, as in the other alternative approaches discussed in the previous section. There appears to be no obvious reason why another functional head with the semantic content 'affect' cannot be posited, in whose specifier an external possessor of a subject is base-generated. It seems desirable to be able to derive the affected reading and its absence for relevant types of external possessor from the characteristics of the construction and their interaction with other independent general properties of language.

5 Concluding Remarks

I argued in this chapter that the operation of *re-association* developed in Chapter 1 and applied to the possessive multiple nominative construction in Japanese in Chapter 2 can be easily carried over to account for the possessive multiple accusative

construction in Korean. This uniform account of the two constructions is highly desirable considering the fact that a possessive nominative phrase and a possessive accusative phrase share a number of properties. It was shown that re-association also accounts for various properties specific to the possessive multiple accusative construction in Korean, including the impossibility of licensing an external possessor bearing a different grammatical function from that of the possessee, object-hood of the external possessor and the possessee and their contrasting behaviour with respect to movement operations and appositive modification.

In Section 3, I proposed that the affected reading associated with the external possessor of an object is a result of licensing the external possessor in terms of re-association. The verb assigns it a re-associated θ-role which is present in the verb's θ-grid and hence it must be interpreted as a participant in the eventuality described by the verb. However, since the semantics associated with the re-associated θ-role provides no information regarding its participation in the eventuality, the affected reading arises due to pragmatic considerations. The absence of a comparable interpretation for an external possessor of a subject is attributed to the necessity in grammar to distinguish external θ-roles from internal θ-roles. It was assumed that the verb's θ-grid is not copied up beyond the verb's maximal projection. Consequently, an external possessor of a subject is not assigned a θ-role which is in the verb's θ-grid. It therefore need not be conceived of as being a participant in the eventuality and be interpreted as affected.

Several alternative approaches offered in the literature were also considered and their respective problems pointed out. One unattractive feature which they all share is that it is difficult to explain the contrast in the interpretation between possessive nominative phrases and possessive accusative phrases. Considering the number of striking similarities in their behaviour, it seems desirable that they are uniformly licensed by the same operation syntactically and that the difference in their interpretation is a consequence of the interaction between the operation and other independent properties of language, as proposed here.

So far it has been assumed that projection of multiple specifiers within one particular projection is involved in licensing more than one phrase with identical case-marking, TP for the nominative and VP for the accusative. However, theoretical considerations suggest that the various types of nominative and accusative phrases we have examined are not necessarily licensed in the same structural configuration. The

nature of the phrase to be licensed plays a crucial role in determining the appropriate structure. The next chapter investigates this issue.

Chapter 5

Multiple Specifiers vs. Multiple Heads

1 Introduction

So far in this dissertation, I have been assuming without discussion that multiple nominative and accusative phrases are licensed in a similar manner, namely in multiple specifier positions in the projection headed by the licensing heads, T and V respectively.[1,2] This is the standard approach particularly for the multiple nominative constructions. However, the justification for invariably postulating this configuration is not immediately obvious. There is in fact a viable alternative configuration containing a multiple number of licensing heads, which has not yet been considered seriously. In this configuration, each head licenses no more than one phrase bearing the same case in its own projection and an additional head is introduced into the structure to license each extra phrase with the same case. This alternative can capture the data concerning the multiple nominative constructions equally adequately, since neither the operation of re-association nor the focus generalisation depends on whether the relevant phrases occupy positions within the same projection (cf. also Vermeulen 2003). The potential of such an alternative should therefore be examined properly. The two possible configurations are illustrated on the next page.

In this chapter, I will not address the typological issue of why Japanese and Korean permit this kind of licensing, while most other languages do not, but rather, the question of which licensing configuration is required by the constructions we have examined so far. It must be stated out the outset, however, that it is extremely difficult to find conclusive arguments for either one or the other configuration, since, as noted above, the two configurations cover the same empirical domain with respect to the constructions investigated in this thesis. Here, I will therefore explore what structures

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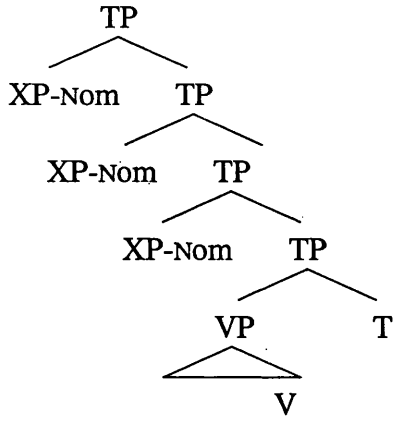
[1] Although I claimed in Chapter 3 that adjunct *ga*-phrases and certain instances of the subject *ga*-phrase of a stative predicate are not nominative phrases, in this chapter, I will sometimes refer to all instances of *ga*-phrases as nominative phrases for convenience.

[2] I remain agnostic as to whether case is assigned or checked and refer to the operation involved as 'licensing' throughout the chapter.

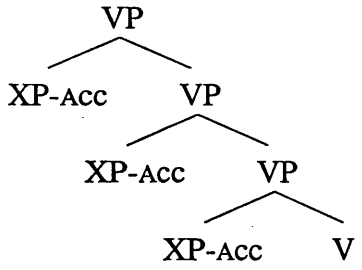
may be possible for each type of construction given the analyses I have proposed in previous chapters. Chapter 6 offers some speculations on the typological issue.

(1) *Multiple Specifiers Configuration*

a.

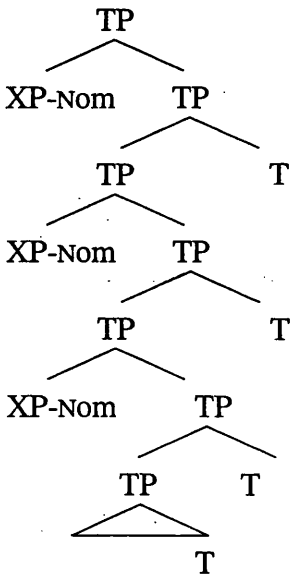


b.

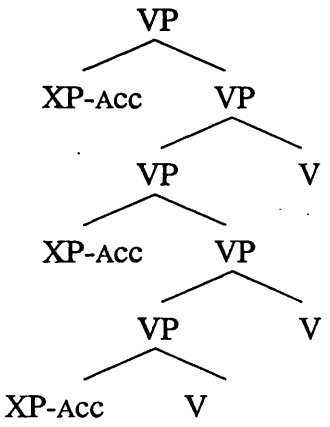


(2) *Multiple Heads Configuration*

a.



b.



Let us first consider the multiple specifiers configuration. This configuration allows recursion in the projection of a specifier within one particular projection, resulting in one projection containing multiple specifiers. One head therefore licenses multiple nominative or accusative phrases occupying multiple specifiers within its own projection. The structure conforms to the Universal Base Hypothesis, which is generally adopted in the minimalist framework. The hypothesis essentially claims that clause structure is universal. The inventory and the sequence of functional categories

are properties of UG and the entire set of functional projections is present in all languages.

If we adopt the Universal Base Hypothesis, the only way in which the licensing of multiple nominative or accusative phrases could be achieved is for a single head to license them within one projection, as described in (1). Since structure is universal, it is simply not possible to postulate additional TPs or VPs only in the presence of multiple nominative or accusative phrases, as in the alternative multiple heads configuration. It can also not be the case that the phrases each occupy a specifier position in a different functional projection and that the licensing head moves through the head positions of the projections. The number of possible nominative or accusative phrase per clause is not pre-determined, as we saw in Chapters 2-4. Thus, it would, in principle, be possible for there to be more nominative or accusative phrases than there are projections, at least in the constructions involving external possessors. Postulating multiple specifiers within one projection therefore seems to be the most natural implementation of the idea that a head may enter into multiple licensing relations under the Universal Base Hypothesis.

Most analyses of multiple nominative constructions in Japanese and Korean and some accounts of the multiple accusative construction in Korean offered within the Government and Binding or minimalist frameworks project multiple specifiers (Saito 1982, Fukui 1986, 1995, Heycock & Lee 1989, 1990, Tateishi 1991, Heycock 1993b, Ura 1993, 1994 1996, Koizumi 1995, Takahashi 1994, 1996, Hiraiwa 2001 for the multiple nominative constructions; J. H.-S. Yoon 1989, 1990, J.-M. Yoon 1997 for the multiple accusative construction). The multiple nominative constructions are often taken to be a convincing piece of evidence for the existence of this kind of licensing mechanism (Koizumi 1995, Ura 1994). Since what is being licensed in every specifier is the same particle, the idea that one head can license its occurrence more than once in its own projection appears plausible. Other constructions have also been argued to lend further support for licensing involving multiple specifiers. They include Transitive Expletive Constructions in Germanic languages (Chomsky 1995b), grammatical instances of Super-raising (Ura 1994), embedded topicalisation and negative preposing in English (Koizumi 1995) and *wh*-islands (Sabel 2002).

The multiple heads configurations illustrated in (2), on the other hand, allow recursion in the projection of a head of the same category, each of which projects its own projection. One head licenses no more than one phrase with identical case-

marking within its own projection. Multiple nominative and accusative phrases are each licensed in a separate projection. Crucially, the structure does not conform to the Universal Base Hypothesis, since the number of projections headed by the licensing head depends on the number of nominative or accusative phrases in the sentence. Functional structure cannot be invariant across languages, simply because some languages allow multiple nominative and accusative constructions, while others do not. Under this approach, the existence of each functional category must be motivated in each language. I assume that the licensing of an additional phrase is sufficient motivation for introducing another licensing head.

There are two further possibilities with respect to the manner in which the multiple heads are created. This is particularly relevant when the licenser is a tensed head, as in (2a). One possibility is that the tensed heads in the structure are all distinct heads, while the other is that they are copies of one tensed head. The first possibility implies that there are always at least as many distinct tensed heads as there are *ga*-phrases in a clause, yielding multiple tense interpretations. It should therefore be possible for each *ga*-phrase to refer to different points in time. However, this prediction is not borne out. Thus, (3a) cannot mean that the rabbits which were in the Northern Hemisphere last year and are in the Southern Hemisphere at present have long ears. Similarly, (3b) cannot imply that students used to buy books at a particular bookshop last year, but they no longer do so, although the shop still exists. The same observation obtains with the stative construction.

(3) a. Kitahankyuu-ga usagi-ga mimi-ga naga-i.
N.Hemisphere-GA rabbit-GA ear-GA long-Pres
'It is the N.Hemisphere, where rabbits have long ears.'

b. ano mise-ga gakusee-ga hon-o yoku ka-u.
that shop-GA student-GA book-Acc often buy-Pres
'It is at that shop that students often buy books.'

The second possibility involves creating multiple copies of one head. Multiple copies of a head can be created by means of self-attachment proposed initially by Ackema, Neeleman & Weerman (1993). Self-attachment allows a head to move and merge with the top node of its own projection and then to project again. As a result, the moved head takes as its complement the maximal projection of its own trace. It is

generally claimed that when movement takes place, it is the target that projects (Chomsky 1995a). However, in the case of head movement, there appears to be no reason, why the moved head cannot project. The structures in (2) satisfy the principles of endocentricity and head uniqueness, the core principles of Phrase Structure theory. Assuming a copy theory of movement (Chomsky 1995b), each TP and VP is headed by exactly one (copy of) T and V, respectively (see Ackema, Neeleman & Weerman 1993, Koeneman & Neeleman 1999, Neeleman & Weerman 1999, Bury 2003 for further discussions).[3]

This operation is potentially recursive and applies only in order to satisfy some syntactic condition which would otherwise be violated. In contrast to the first possibility in this configuration, self-attached heads are not distinct heads, but are copies of the same head created by movement. It follows then that there is only one tense interpretation in a clause containing multiple copies of a tensed head.

The derived structure in (2b) is similar to VP-shells in the sense of Larson (1988). However, they differ in two crucial respects. Firstly, in the case of self-attachment, verb movement is not to an already existing position. There is therefore no restriction on the number of copies of the verb that can be created. Secondly, the phonetically null light verb in a VP-shell is associated with causal semantics. A derived verb, on the other hand, does not acquire any additional semantics as a result of self-attachment, since it is merely a copy of the verb in its base position.

Thus, there are, in principle, two configurations in which a tensed head and a verb can license multiple nominative phrases and accusative phrases, respectively. In one configuration, one head licenses the phrases in multiple specifier positions in one projection, while in the other configuration, multiple copies of the head license the phrases in distinct projections.

At first sight, it may seem reasonable to argue that economy considerations would permit only one configuration for the purpose of licensing multiple phrases bearing an identical case in a particular language. However, if all instances of multiple nominative and accusative phrases are licensed exclusively in one of the configurations, an additional constraint must be stipulated so that the generation of the other configuration is prevented. In this chapter, I will argue that both configurations

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[3] See also Nash & Rouveret (1997) and Haeberli (2001) who derive similar effects with postulation of a proxy category, which is a feature-less functional category, which inherits features from a contentful head by movement of the latter to the former.

are in fact required by the grammar and that the thematic status of the phrase to be licensed dictates which configuration is employed.

In doing so, I will first claim that there is no independent support for adopting the Universal Base Hypothesis, which forces the projection of multiple specifiers and excludes the multiple heads configuration. Arguments which have been put forward in its favour are based on assumptions which are themselves rather questionable, and adopting the hypothesis has some undesirable repercussions in other components of the grammar. The multiple specifiers configuration is not contingent on the hypothesis, hence even if the hypothesis is weakened, its postulation is possible. However, there are then *a priori* no reasons to employ one of the two configurations exclusively.

I will then demonstrate that considerations concerning θ-theory ultimately determine in what configuration a certain nominative or accusative phrase is licensed. Multiple accusative phrases must be licensed in multiple specifiers, since they are licensed as internal arguments of the verb. It is well-known that a predicate cannot assign a θ-role from a moved position, a condition most explicitly stated as the Generalised Projection Principle (Brody 1995). Thus, licensing an additional internal argument in a projection headed by a functional, self-attached, head is disallowed.

The three types of multiple nominative constructions differ in the licensing configuration they require. Recall that the external possessor of a subject is licensed by predication. It is generally assumed that a predicate must be a maximal projection (Williams 1980, 1983, 1987, Marantz 1984, Rothstein 1983, Bowers 1993, 2001, Heycock 1994, Chomsky 1995b, among many others). It follows then that the external possessor of a subject must be licensed in a multiple heads structure, so that its predicate, which contains its possessee, is a maximal projection. Similarly, the nominative subject of a stative predicate is licensed by predication by virtue of its being subject. Its case must therefore be licensed in a distinct projection from the object. On the other hand, adjunct *ga*-phrases are not licensed by predication, requiring no maximal projection to be predicated of it. Although nothing prevents such a phrase from being licensed in a multiple heads configuration, reasons of economy favour a multiple specifiers configuration, since the latter generates less structure.

One prediction which the existence of the multiple heads configuration makes is that the licensing head undergoes movement, as extra structure is created only by movement of the licensing head. Since Japanese is a strictly head-final language, verb movement, if it exists, is necessarily string vacuous. String vacuous movement is

usually disfavoured, since such movement does not change word order, which implies great difficulties in its acquisition (Chomsky 1986). This has led some linguists to conclude that Japanese lacks overt verb movement (Fukui 1986, 1995, Fukui & Takano 1998, Sakai 2000, Fukushima 2003, Takano 2002, Fukui & Sakai 2003, Takano 2004). However, I will argue, based on evidence provided by Koizumi (1995, 2000), that there is string-vacuous movement of tensed heads in this language.

The chapter is organised as follows. Section 2 demonstrates that there are no valid grounds to adopt the Universal Base Hypothesis in the theory of grammar. Section 3 claims that multiple accusative phrases are licensed in multiple specifier positions in VP, while Section 4 demonstrates how different types of *ga*-phrases require distinct licensing configurations. In Section 5, I will discuss evidence for verb movement and argue that Takano's (2002) and Fukui & Sakai's (2003) alternative analyses of Koizumi's data without assuming verb movement are flawed and untenable. Concluding remarks are noted in section 6.

2 The Universal Base Hypothesis

According to the Universal Base Hypothesis clausal architecture is universal. The only configuration in which multiple nominative or accusative phrases can be licensed by a single head is by postulating multiple specifiers as in (1). Thus, if such a hypothesis is part of Universal Grammar, the generation of the kind of multiple heads structures in (2) would be disallowed altogether. However, there are reasons to believe that the hypothesis itself does not hold. More specifically, various arguments which have been put forward in its favour do not actually lend support for its validity, and adopting the hypothesis implies a number of unwelcome repercussions in other components of the grammar. In this section, I will discuss these two issues in turn.

2.1 The validity of the Universal Base Hypothesis

I consider here three supporting arguments offered in the literature for the Universal Base Hypothesis. A first argument is that, coupled with the widely held view that semantic properties are encoded by particular functional heads, it allows the mapping between syntax and semantics to be maximally transparent at LF. The idea of transparent mapping between the two modules has also been employed in other areas of the grammar. An obvious example is the Uniform Theta Assignment Hypothesis,

where θ-roles are each associated with a specific position in the syntactic structure (Baker 1988, cf. also Hale & Keyser 1993). From a theoretical point of view, such systematic mapping appears most restrictive and therefore attractive.

Moreover, Cinque (1999) points out that if clausal structure varies according to the interpretive properties expressed by the sentence, an extra convention is required to interpret correctly the absence of a functional head as the absence of the features associated with it. On the other hand, if clause structure is universal and if each functional head is associated with either a default feature or a marked feature, the absence of particular semantic features can be represented in the structure as the default feature of relevant functional heads. Thus, considerations of parsimony and elegance argue for a maximally transparent mapping between syntax and semantics and hence for the validity of the Universal Base Hypothesis, which facilitates it.

However, it is not entirely clear whether such a systematic mapping is actually desirable, especially because, as Koeneman & Neeleman (2001) observe, one semantic notion is not always encoded in a uniform manner in the syntax. For example, in Dutch, attaching a diminutive suffix to a noun expresses near-identical semantics as the modification of the same noun by an adjective meaning 'small'. Similarly, Corver (1997), Doetjes (1997) and Doetjes et al. (2004) show that elements expressing the semantic notion of degree do not display a uniform behaviour in the syntax. Some behave like functional heads, while others demonstrate properties associated with adjuncts. In other words, there seems to be variation in the way that one grammatically encoded semantic notion is manifested in syntax. Thus, although a rigid mapping between syntax and semantics appears attractive on theoretical grounds, it does not seem to reflect the nature of language most accurately.

Furthermore, it is also not clear whether an extra convention is really necessary to interpret correctly the absence of particular functional heads. It seems that the Elsewhere Principle can apply in such instances. The Elsewhere Principle essentially states that the most specific option must be chosen or else the default option applies (cf. Kiparsky 1973, Halle & Marantz 1993, also DiSciullo & Williams 1987, Williams 1997 for similar effects in terms of Blocking). For example, the default option for English verbs is that they are interpreted as unspecified for tense. However, there exists a rule in the grammar of the language, which instructs that the verbs should be interpreted as in the past tense if they are marked with the suffix *–ed* (abstracting away from irregular forms). The bare form cannot be used for past tense, because of the

existence of the more specific form *V-ed.* In other words, verbs appear in the form *V-ed* if they are to be interpreted as in the past tense, or 'else' the bare form is used. The same reasoning can be applied to other functional notions such as mood and aspect. If no special markings or independent phrases associated with such notions are present, the Elsewhere Principle would instruct that the interpretation with respect to these notions be the unmarked one.

The Elsewhere Principle is independently motivated in various other components of the grammar such as morphology and phonology. Adopting this principle would not require any further assumption about the feature composition of a functional category or a more complex mechanism for interpretation. Thus, the argument that the Universal Base Hypothesis allows a maximally transparent mapping between syntax and semantics does not support the validity of the hypothesis.

A second, empirical, argument for the presence of the universal set and sequence of functional projections is presented by Cinque (1999). A cross-linguistic investigation of the distribution of clausal adverbials reveals that the functional notions that they express and the order in which they appear are universally invariant. Although the sequence of adverbials reflects intrinsic logical relations to some extent, it cannot be reduced entirely to other components such as semantics. Thus, for example, within the available evidence, some logically conceivable orders are simply unattested and some attested orders are not explicable in terms of logical or semantic properties.[4] Cinque claims that these observations are best captured if functional notions expressed by adverbials are represented in the syntax by functional categories whose architecture is a property of UG. If the structure of functional categories is identical in all languages, it follows straightforwardly that expressible notions and the order in which they appear do not vary cross-linguistically. Verbs move to various functional heads, which derives word order differences.

It seems reasonable that the order among the adverbials and hence the possible functional notions that they express are determined by UG. However, Cinque's approach does not seem to be the only possible option in accounting for the facts. It is equally plausible that adverbials and verbal elements obey separate universal principles which constrain their respective ordering. Furthermore, the fact that the notions expressible by adverbials are the same across languages is not necessarily best

[4] However, see Nilsen (2003) who argues that the ordering among adverbials is determined by semantic properties of the adverbials involved.

captured by the proposal that the whole set of functional projections associated with them are present in all languages. Since it must simply be stipulated under the Universal Base Hypothesis which semantic notions correspond to functional categories in the syntax, an independent principle stating which functional notions are expressible by human language in which order would also capture the observation. The latter approach does not require the entire functional categories to be present in all languages. As argued above, the Elsewhere Principle can ensure that the absence of a particular functional category yields the unmarked interpretation of the associated semantic notion. Thus, in accounting for the universal properties of adverbials, it is not crucial that clause structure is universal. In other words, Cinque's observations do not provide direct support for the validity of the hypothesis.

Finally, an argument which has often been put forward for the Universal Base Hypothesis is based on considerations about language acquisition. If clausal architecture were a property of UG, a child would be presented with a pre-determined set and sequence of functional categories. Thus, the existence of a particular functional category in a specific language need not be motivated and questions related to how a child acquires functional categories do not arise, resulting in a simpler theory of language acquisition.

It is questionable, however, whether such a theory of language acquisition is actually simpler than one based on a flexible approach to clause structure. It is true that if the entire set of functional projections is not a property of UG, the presence of each functional category must be motivated. On the other hand, if a child is presented with a full array of functional categories, he or she must still determine which semantic notions, hence functional categories associated with them, are never overtly realised in their language. Thus, regardless of whether the clausal structure is universal, a child must acquire which functional categories are grammatically encoded in their language.

In sum, since assuming the hypothesis does not provide any theoretical or empirical, there appears to be no reason to adopt it. Let us now turn to some unwelcome consequences of adopting the Universal Base Hypothesis.

2.2 Consequences of adopting the Universal Base Hypothesis

There are further reasons to doubt the validity of the Universal Base Hypothesis. More specifically, assuming the hypothesis has unwelcome repercussions in other components of the grammar. Here, I discuss three such instances. A first consequence

of adopting the hypothesis is a proliferation of null heads (Iatridou 1990). If the inventory and the sequence of functional categories are uniform across languages, there will be categories which have overt realisation in some languages but not in others. Consequently, categories which are never spelled out in a certain language must still be present and represented as null in that language. It is unclear how an analysis of a particular language benefits from this kind of approach. Claiming that all functional categories are present in every language would yield an account which is not optimal for every language. Thus, although there is never subject or object agreement on the verb in Chinese, consistently null AgrS and AgrO must still be projected, because in languages such as French, there is overt morphology associated with these functional categories.

Even within one language, it is not obvious that clause structure is uniform. For example, there are circumstances under which subject-verb inversion is found in English embedded clauses, which presumably requires extra functional structure (Grimshaw 1997, Vikner 2001, Bury 2003). According to the Universal Base Hypothesis, the extra structure should also be present in clauses without subject-verb inversion. This does not appear to be a desirable consequence. As Thráinsson (1996) points out, postulating such empty structures is against the spirit of the minimalist framework, especially the general principle of Economy of Representation, according to which representations cannot contain any superfluous material (Chomsky 1991, cf. also Grimshaw 1997). Since there is no independent motivation for introducing empty functional projections in embedded clauses in the absence of subject-verb inversion, they are redundant. If, on the other hand, clause structure varied across languages, no superfluous material would be postulated.

Sportiche (1993) points out that null heads are generally available in most theories to represent some features which are not overtly realised, such as English non-past tense. Consequently, he argues, the fact that an element is phonologically silent does not indicate its structural absence. However there is a crucial distinction between a consistently null head and a gap in a paradigm. In particular, from an acquisition point of view, postulating a null head for a gap in a paradigm is fully justified by the existence of other overt material in the paradigm. Thus, postulating a null head for English non-past tense is warranted, as past tense, for instance, is overtly realised. By contrast, a consistently null head cannot be identified in a similar manner, as no material in the relevant paradigm is ever spelled out.

Moreover, a structure that is based on the Universal Base Hypothesis is inevitably larger than a structure that is not. This implies that ungrammatical word orders can be derived with relative ease, since there are more positions to which elements can potentially move. A theory which projects larger structures and requires additional constraints only to rule out unwanted results produced by the structure is clearly sub-optimal and unattractive.

A second argument against adopting the Universal Base Hypothesis is that cross-linguistic variation can often be explained more directly in terms of variation in the architecture of functional categories than in analyses assuming the hypothesis. For example, Thráinsson (1996), Bobaljik & Thráinsson (1998), Koeneman & Neeleman (2001) argue for a correlation between the existence of verb movement and the possibility of Transitive Expletive Constructions in Germanic languages, where an expletive and a subject both appear in a clause headed by a transitive verb. Verb movement indicates extra structure, which provides positions for the expletive and the subject.[5] Consequently, in languages without verb movement, no extra functional projections are present, explaining the absence of the constructions in these languages. The authors demonstrate that various other properties follow from their analyses in the relevant languages. Under the Universal Base Hypothesis, on the other hand, this correlation between verb movement and the constructions cannot be explained in terms of clause structure. It must simply be stipulated. Bobaljik & Jonas (1996) and Chomsky (1995b), for instance, suggest that some specifiers are unavailable in languages that do not allow the constructions. It seems rather peculiar that stipulations must be made about clause structure, if it is supposed to be universal.

Finally, the Universal Base Hypothesis simplifies phrase structure rules, hence its incorporation into the theory of grammar may at first seem attractive. However, this simplification leads to complications in other areas of the grammar. Firstly, if clause structure is universal, various possible word orders must be derived entirely by movement. On standard assumptions, movement must be properly motivated by triggering features on functional heads whose specifiers serve as landing sites for the moved elements. Moreover, these features must be associated with some independent semantic or grammatical notions. Considering the possible number of word order

[5] The authors mentioned here differ in the details of their analyses. Thráinsson (1996) and Bobaljik & Thráinsson (1998) argue that verb movement is a result of extra functional projections, while Koeneman & Neeleman (2001) claim that verb movement creates extra functional projections.

permutations attested in the world's languages, finding evidence for each such notion, and hence the presence of an associated functional projection, appears to be an impossible task.

Furthermore, it is likely that many of the heads which contain triggering features are consistently null categories. Besides the complications in acquiring such categories, as already noted above, they also cause difficulties in identifying the exact position of other overt material. For example, if some language had adverbials for functional notions expressed by the categories XP and ZP, but not by YP, in a pre-determined sequence, XP YP ZP, and if this language had verb movement which resulted in the verb appearing in a position between XP and ZP, it is impossible to determine whether the verb occupies the head of XP or the head of YP (Koeneman & Neeleman 2001). Such ambiguity seems highly undesirable in a formal system.

Another consequence of simplified phrase structure rules is complication in the theory of movement. Bobaljik (1999) points out, with particular reference to Cinque's (1999) account of the rigid ordering of adverbials, that serious technical problems arise if one assumes universal clause structure. For example, in Italian, an auxiliary may precede or follow a certain type of adverbials, which a past participle can also precede or follow. The relative ordering between the auxiliary and the past participle is fixed however: the former must precede the latter. The problem occurs when they both precede the adverb in question. Movement of the verbs unavoidably violates the Head Movement Constraint. The point is illustrated below. The movement of the participle must skip over the trace of the auxiliary and the movement of the auxiliary must cross the moved participle.

(4) $[_{FP1}$ Aux $[_{FP2}$ Participle $[_{ADVP}$ Adv t_{AUX} $[_{FP3}$ t_{PART} [...

In response to this problem, Cinque proposes that two elements undergoing movement may sometimes skip over each other, but must retain the base order. Such a rule is *ad hoc* and therefore weakens his argument based on parsimony. It also introduces a type of movement which is not attested anywhere else, evidently an undesirable consequence.

Thus, not only are there no arguments which directly support the validity of the Universal Base Hypothesis, but assuming it has undesirable repercussions. The preceding discussion is summarised below.

(5) (i) The hypothesis facilitates a transparent mapping between syntax and semantics, but such mapping itself is not necessarily desirable;

(ii) universally invariant properties of adverbials may suggest the existence of universal principles governing adverbials, but this need not be explained by the presence of universal functional structure;

(iii) assuming the hypothesis does not necessarily lead to a simpler theory of language acquisition;

(iv) the hypothesis permits generation of structures which are against economy;

(v) the hypothesis does not allow differences among languages to be reduced to variation in clausal architecture;

(vi) a number of (potentially consistently null) functional categories, and features associated with them, must be introduced and a stipulative rule about movement must be postulated in order to trigger movements to derive grammatical word orders.

An approach which does not assume a universal syntactic structure does not face these difficulties. In such an approach, structures are postulated based on economy conditions. As a consequence, no extra features or constraints on derivable structures need be postulated. Furthermore, cross-linguistic variation can be captured in terms of variation in clause structure, when there is a generalisation to be made. Thus, a flexible approach to clause structure appears more promising.

This conclusion has some implications for the issue of licensing configurations for multiple nominative and accusative constructions. Recall that the Universal Base Hypothesis forces the postulation of multiple specifiers in order to account for the licensing of multiple nominative or accusative phrases by a single head. If the hypothesis is weakened however, there seems to be no reason why a configuration involving multiple specifiers should be preferred to another containing multiple heads. It may appear intuitive at first sight that grammar would employ only one of the two configurations due to economy considerations. However, if this were the case, additional assumptions must be made in order to prevent the generation of the other configuration. For instance, a theory allowing only the multiple specifiers structure must assume that no self-attachment for the purpose of licensing an additional phrase is permitted. Similarly, if the multiple heads configuration is employed exclusively, it must be stipulated that multiple specifiers cannot be projected. These assumptions do

not seem independently motivated. It therefore is not entirely a desirable outcome that multiple nominative or accusative phrases are invariably licensed in a uniform manner. It could be that grammar makes both configurations available. In the next two sections, I will explore this option and argue that considerations related to θ-theory determine which configurations should be employed for a particular phrase. Specifically, whether the phrase is an internal or external argument appears to play a crucial role.

3 Licensing Multiple Accusative Phrases

In this section, I will argue that multiple accusative phrases must be licensed in multiple specifier positions within VP. Before I discuss the licensing configuration, it is necessary to clarify what the licensing head is for accusative case.

3.1 The licenser of accusative case

Within the Government and Binding framework, it was widely assumed that the verb assigns accusative case on the object in the complement position of the verb, where it is also assigned a θ-role. More recently, within the minimalist framework, it is assumed that the object undergoes movement to a specifier position of a particular functional projection, such as AgrOP or vP, where its case features are checked by the head of that projection.

In Japanese and Korean, however, there appears to be no motivation for assuming that case on the object is licensed in a position distinct from the one in which it receives a θ-role. Koizumi (1995) argues with data concerning scope of the object with respect to a complex predicate that accusative case in Japanese is licensed in SpecAgrOP rather than by the verb in its base position. Relevant examples involve complex predicates headed by control verbs, which are derived in the syntax. A quantified object necessarily takes scope over the control verb, *wasure-* 'forget', as illustrated below.

(6) John-wa ringo-dake-o tabe-wasure-ta
John-Top apple-only-Acc eat-forget-Past
'John forgot to eat only apples.'

(a) only > forgot (Among many things John was supposed to eat, it is only apples that he forgot to eat.)

(b) *forgot > only (It is eat only apples that John forgot to do.)

Koizumi claims that case on the object cannot be licensed in its base-position, but must be licensed in the specifier position of a functional projection, namely AgrOP, situated higher than the control verb, from where it also takes scope. Thus, the object receives a θ-role in the complement position of the verb and subsequently moves for case. A control verb such as *wasure-* can function as a transitive verb on its own and independently license an accusative object. In Koizumi's system, it is essential that the accusative features of the object in the above example are checked against the accusative features of the control verb, as movement for case explains the wide scope reading of the object.

This approach predicts that when the object appears in the dative, it does not raise to SpecAgrOP to check its case against the control verb, since the latter only checks accusative features. In other words, a dative object should not take scope over the control verb. However, this prediction is not correct, as the following example illustrates. The sentence can only mean that among many groups of people John was supposed to meet, it is only children he forgot to meet.

(7) John-ga kodomotati-dake-ni ai-wasure-ta
John-GA children-only-Dat meet-forget-Past
'John forgot to meet only children.' only > forget; *forget > only

Thus, although the data such as those in (6) must of course be explained properly, they do not seem to lend support for an analysis in which case of the object is licensed in a functional projection rather than in VP.

One may argue that licensing case in a functional projection, while restricting θ-role assignment to lexical projections accommodates an elegant split between a functional domain and a lexical domain in clausal structure. However, it is not entirely clear to me why this split is desirable. It creates extra structure only to allow checking of some features of an argument against relevant features of the selecting head, despite the fact that the two items are already in a local configuration in their base-positions.

In the absence of independent motivation, I assume that a verb licenses accusative case on the object in VP in Japanese and Korean.

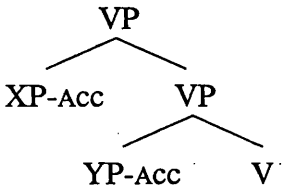
3.2 Possessive accusative phrases

The discussion in the previous subsection leaves us two options regarding the structure for a sentence with a multiple accusative construction, such as the following, repeated from Chapter 4.

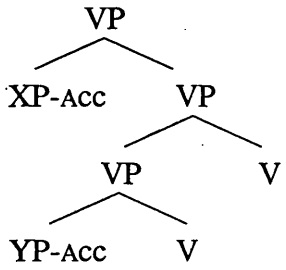
(8) Mary-ka John-ul tali-lul cha-ss-ta
Mary-Nom John-Acc leg-Acc kick-Past-Decl
'Mary kicked John's leg.' (Cho 1992: 15)

One configuration involves postulation of an additional specifier position in VP, while the other projects separate VPs recursively. The two possibilities for the above example are illustrated below, where XP refers to the external possessor *John-ul*, while YP is the thematically selected direct object of the verb, *tali-lul* 'leg-Acc'.

(9) a. *Multiple Specifiers Configuration*



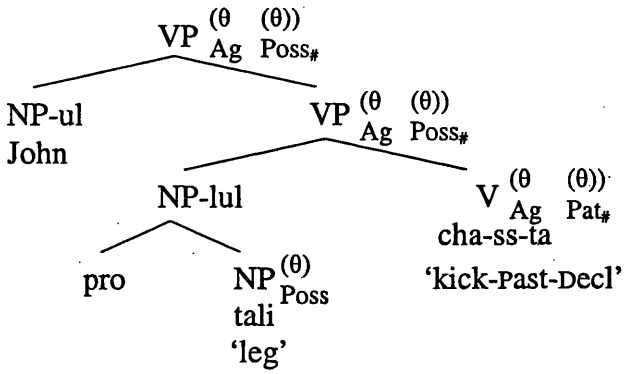
b. *Multiple Heads Configuration*



Recall that according to the analysis of this construction developed in Chapter 4, the internal θ-role assigned to the object is re-associated with semantics contained in the object, made available by the presence of a resumptive *pro*. The re-associated θ-role is then assigned to the accusative possessor. Thus, it is syntactically licensed as an internal argument of the verb, but is interpreted as a possessor of the object. Internal arguments are, by their very nature, licensed within the maximal projection headed by the predicate that selects them. It is well-known that a predicate cannot select its arguments from a moved position, a constraint most explicitly stated as the Generalised Projection Principle (Brody 1995). Thus, internal arguments should be licensed within VP projected by the verb in its base-position.

In the structure in (9b), the external possessors are licensed as internal arguments of a verb which has undergone movement. Licensing of internal arguments in such a configuration violates the Generalised Projection Principle and is hence disallowed. On the other hand, in the structure in (9a), the external possessor is base-generated and assigned a θ-role within the projection of the verb in its base-position, which legitimately licenses it as the verb's internal argument. Thus, the multiple specifiers configuration must be employed in licensing multiple accusative phrases rather than the multiple heads configuration. The structure proposed in Chapter 4 is therefore not affected by the present discussion. The relevant part of the structure is repeated below.

(10)



Let us now consider in which configuration multiple nominative phrases should be licensed.

4 Licensing Multiple Nominative Phrases

In Chapters 2 and 3, I considered three types of multiple nominative constructions in Japanese: the possessive multiple nominative construction, the adjunct multiple nominative construction and the stative construction. In this section, I will argue that although they all involve licensing of the same particle, which is licensed by the same licensing head, namely a tensed head, the configuration employed is not necessarily the same. It depends on whether the phrase in question is an argument and if so, whether it is an external or internal argument. I will discuss each construction in turn.

4.1 Possessive multiple nominative construction

Recall that in Japanese, the possessor of the nominative subject can be licensed in the nominative externally to the projection headed by the subject. An example is repeated below.

(11) Taroo-ga titioya-ga nyuuin-si-ta.
Taro-GA father-GA be.hospitalised-Past
'It is Taro whose father was hospitalised.' (modified from Tateishi 1991: 270)

I argued in Chapter 2 that the external possessor of a subject is licensed by predication mediated by re-association. It receives an external θ-role which has undergone re-association with semantics present in the external argument of the verb. Since it is not licensed as an internal argument, it need not be licensed in the same projection as its possessee, unlike possessive accusative phrases. However, at first sight, the multiple specifier configuration may appear preferable to the multiple heads configuration, since it generates less structure and hence is more economical. Nevertheless, there are reasons to believe that the multiple heads configuration should be employed in licensing external possessors of external arguments.

It is widely assumed in the contemporary literature that external arguments are base-generated outside of the maximal projection headed by the lexical predicate (Heycock 1994, Chomsky 1995b, Bowers 1993, 2001, Williams 1994, Kratzer 1996, cf. also Williams 1980, 1987, Rothstein 1983 and Marantz 1984).[6] In most instances, it is base-generated in a specifier position of a particular functional projection, such as vP or TP. Let us state this assumption explicitly as a structural condition on predication as below. It seems reasonable to assume that the notion 'predicate' is part of Universal Grammar and that a condition such as (12) therefore holds cross-linguistically.

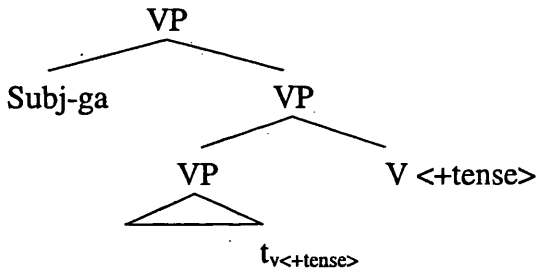
(12) Predicates must be maximal projections.

---

[6] In the period from mid-1980's to mid-1990's, there was much debate as to whether subject originates within the lexical VP projection. However, with the increase in the role played by functional projections, it seems a fair generalisation to make that subjects are now generally introduced into the structure by some functional category outside of VP that contains a verb and its internal arguments. See Bowers (2001) for an overview of the development of this issue and further discussion.

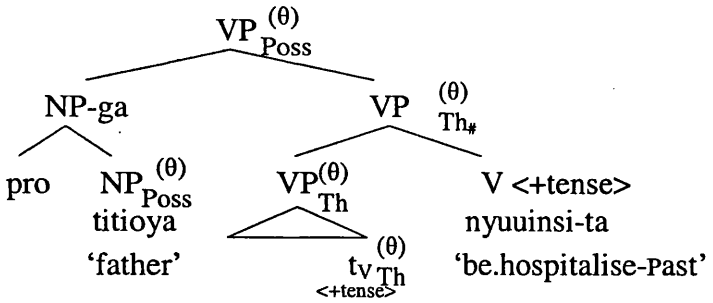
For a simple intransitive sentence in Japanese, I assume that the VP containing the verb in its base-position functions as a predicate for the subject. The subject must therefore be base-generated in a projection higher than the VP. I have assumed so far that this projection is TP. However, it is in fact unclear whether TP is projected in Japanese, as its role seems rather inactive, particularly if one assumes that verb is inserted into the structure fully inflected for tense (Fukui 1986, Kuroda 1988, Fukui & Sakai 2003, among others). I propose instead that in order to achieve the desired effect, the verb undergoes self-attachment and projects, taking the maximal projection of its own trace as its complement. The subject is base-generated in a specifier position of this VP, as shown below. Moreover, I assume that tense features are always directly generated on the verb and, adopting the copy theory of movement, tense features are also present on the moved verb. Implications of this assumption for non-stative transitive verbs will be discussed in Section 4.3.

(13)



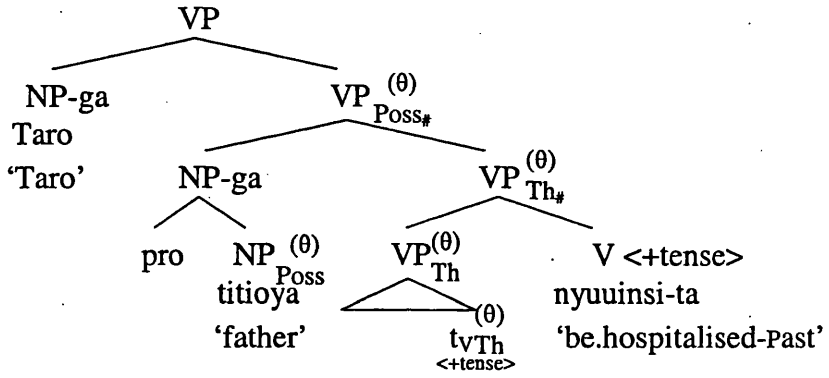
Since the external possessor of a subject receives an external θ-role, some maximal projection must function as its predicate. The predicate in question cannot correspond to the VP headed by the lexical verb, however. The only reason why the verb's external θ-role can be assigned to the external possessor in addition to the verb's thematic subject is because it is re-associated with distinct semantics contained in the subject, made available by the presence of *pro*. Thus, the subject plays an integral part in assigning the verb's external θ-role to the external possessor. In this sense, the *pro* contained in the subject functions like a predicate variable in the sense of Williams (1980) (cf. also Browning 1987). The maximal projection which is predicated of an external possessor should therefore minimally contain the possessee. The following structure represents one such maximal projection.

(14)



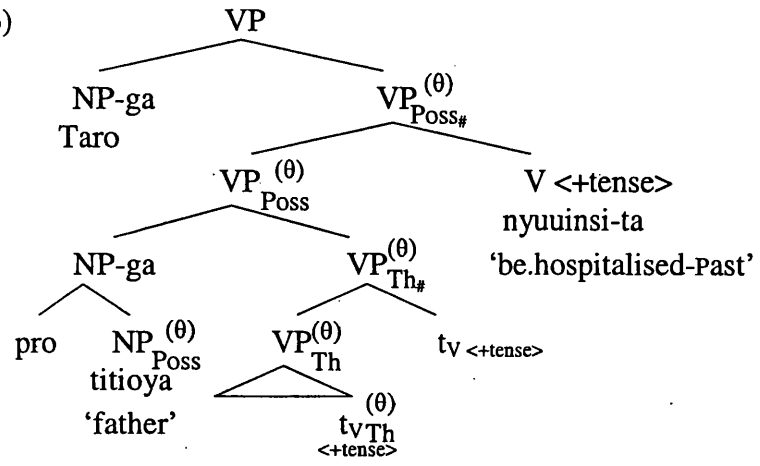
In Chapter 2, the analysis of the possessive multiple nominative construction was presented in a multiple specifiers structure. Translating TP into self-attached VP, the structure is illustrated below. However, this structure is in conflict with the condition in (12). In the following structure, the VP which corresponds to the structure in (14) is not a maximal projection, hence cannot function as the predicate for the external possessor *Taro-ga* 'Taro-GA'.

(15) *



On the other hand, the desired effect can be achieved if a multiple heads structure is employed. The VP in (14) would then be a maximal projection and can function as the predicate for the external possessor. Such structure can be created if the head of the VP in (14) undergoes self-attachment, taking the maximal projection of its trace as its complement, yielding structures like the following.

(16)



Here, the external possessor is base-generated in the specifier position of VP which is projected by the moved tensed head. In this position, it is assigned the re-associated θ-role and its case is also licensed by the moved tensed head.

A structure containing multiple copies of a tensed head derived by self-attachment predicts that a tensed head undergoes movement, since extra structure for licensing *ga*-phrases including the subject can only be created if the licensing head moves and subsequently projects. As Japanese is a strictly head-final language, such movement is necessarily string-vacuous and may therefore be disfavoured, as it entails great difficulty in acquiring the language. However, I will provide evidence in Section 5 suggesting that tensed heads indeed do undergo movement in Japanese. Let us first consider the remaining two types of constructions.

4.2 Adjunct multiple nominative construction

An example of an adjunct multiple nominative construction is repeated below from Chapter 3, where *ano mise-ga* 'that shop-GA' is an adjunct *ga*-phrase.

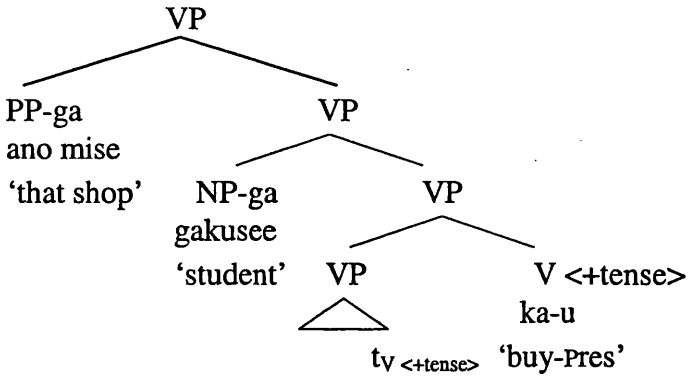
(17) ano mise-ga gakusee-ga hon-o yoku ka-u.
that shop-GA student-GA book-ACC often buy-PRES
'It is at that shop that students buy books.'

Recall that in contrast to possessive nominative phrases, re-association is not involved in licensing adjunct *ga*-phrases. The latter are independent of other arguments in the clause and are not licensed by predication. Thus, although it appears in a superficially similar position to a possessive *ga*-phrase, no maximal projection need be predicated of an adjunct *ga*-phrase. The clause-initial positioning of adjunct *ga*-phrases is related to the fact that *ga* on an adjunct must be interpreted as a focus marker rather than a case marker, since adjuncts do not usually require case.

It appears then that an adjunct *ga*-phrase can be licensed either in the same maximal projection as the subject *ga*-phrase or in a distinct projection headed by a self-attached tensed head. It seems extremely difficult to test which configuration is the correct structure for licensing an adjunct *ga*-phrase, as the two configurations cover the same empirical domain with respect to this construction. Furthermore, since the multiple heads configuration is required independently by the possessive multiple nominative construction, as we saw above, the existence of other properties in the

language predicted by the multiple heads approach such as verb movement, which is discussed in Section 5, is accounted for. However, considerations of economy dictate that a structure containing multiple specifiers should be employed, since it generates less structure than a structure containing multiple heads, as shown below, and as assumed in Chapter 3.

(18)



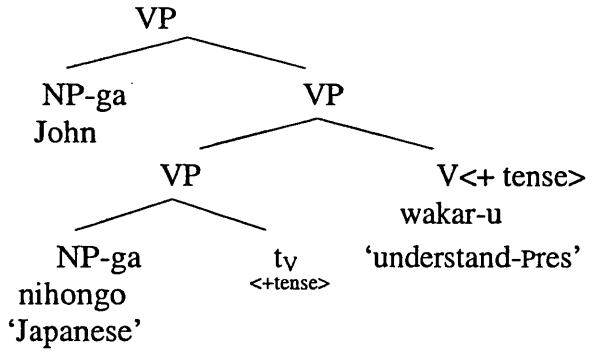
4.3 Stative construction

Let us finally consider the licensing of *ga*-phrases in the stative construction. An example of the construction is provided below.

(19) John-ga nihongo-ga wakar-u.
John-GA Japanese-GA understand-Pres
'It is John who understands Japanese.' (Takezawa 1987:24)

Nihongo-ga 'Japanese-GA' is an internal argument and therefore must be licensed within the VP headed by the verb in its base-position, as required by the Generalised Projection Principle. On the other hand, *John-ga* is an external argument and hence must be licensed in a projection outside of the VP. The verb undergoes self-attachment and projects from the moved position so that the subject can be legitimately licensed, in accordance with the condition in (12), yielding structures like the following for the sentence in (19). Moreover, since tense features are directly generated on the verb, nominative case on the object can be licensed in the lowest VP, while nominative case on the subject is licensed by tense features on the moved verb.

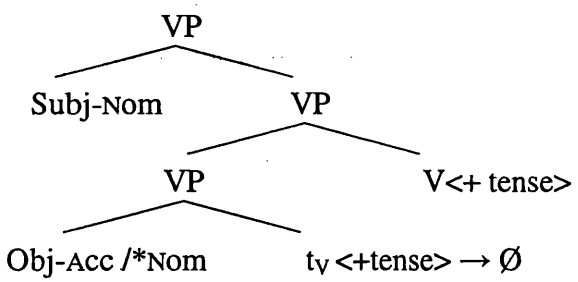
(20)



The proposed structure has repercussions for the analysis of sentences with transitive non-stative verbs. As we saw in Chapter 3, the objects of such verbs cannot appear in the nominative. I suggested there that tense features can only be directly generated on stative verbs and not on non-stative verbs, due to the lack of aspectual properties entailed by the former. This explained the possibility of marking the object in the nominative only if the verb is stative. It is possible to provide a re-interpretation of this idea in terms of the approach suggested here.

I maintain that verbs are introduced into the structure with tense features. However, when the verb is non-stative, tense features cannot be present in the VP that contains the verb and its object, as the aspectuality of the sentence is determined by the combination of the two elements. I propose, following Neeleman & Weerman (1999), that under such circumstances, the tense features on the lowest copy of the verb are deleted. This does not imply that sentences with non-stative transitive verbs are tense-less. Tense features are still present on the moved verb. A sentence headed by a transitive non-stative verb therefore has the following structure.

(21)

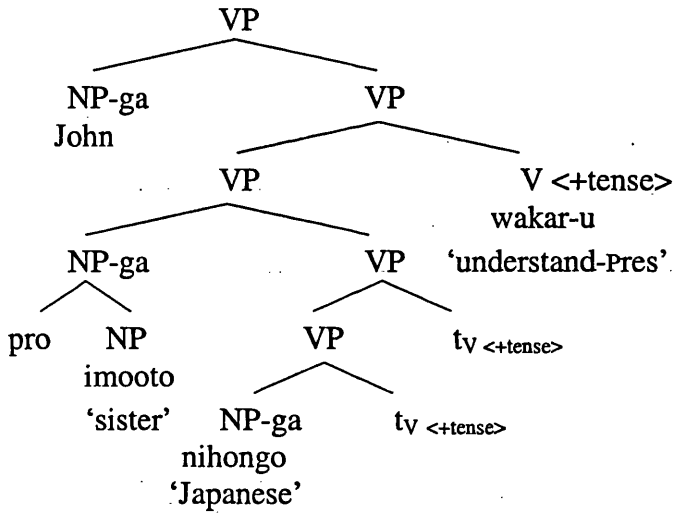


Returning to the stative construction, recall that this construction can interact with the other two types of multiple nominative constructions in three respects. Firstly, a possessor of the subject may be realised in the nominative externally to the subject, as shown below.

(22) John-ga imooto-ga nihongo-ga wakar-u.
John-GA sister-GA Japanese-GA understand-Pres
'It is John whose sister understands Japanese.'

An external possessor of a subject *ga*-phrase in the stative construction is licensed by predication mediated by re-association, as in the general instance of an external possessor of a subject discussed in Section 4.1. The fact that the object also appears in the nominative has no significance. Thus, the external possessor should be licensed in a projection distinct from the subject *ga*-phrase, yielding structures like the following for the example in (22). I omit below details of re-association, as the process involved is identical to that in (16), a normal instance of external possession.

(23)



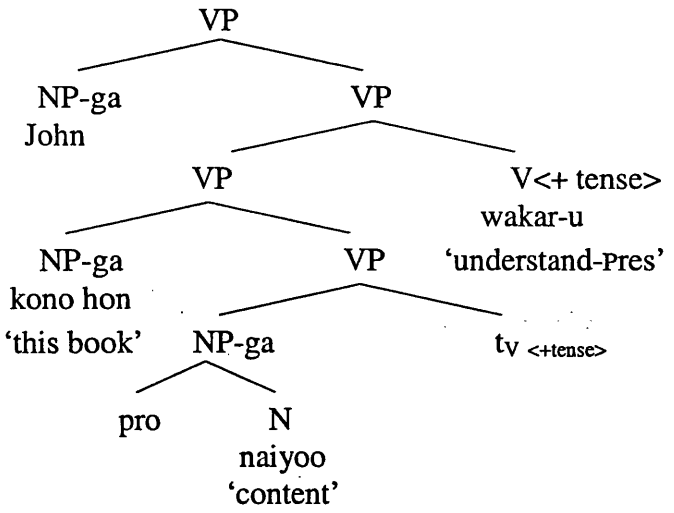
Secondly, a possessor of the object may also be realised in the nominative externally to the object, as the following example illustrates.

(24) John-ga kono hon-ga naiyoo-ga wakar-u
John-GA this book-GA content-GA understand-Pres
'John understands the content of this book at all.'

An external possessor of a nominative object must be licensed in a similar fashion to accusative possessive phrases discussed in Section 3. Since it is assigned an internal θ-role which has undergone re-association with semantics present in the object, it is licensed as an internal argument of the verb. Consequently, it must be licensed within

the projection of the lowest copy of V, resulting in a structure with multiple specifiers, as shown below.

(25)

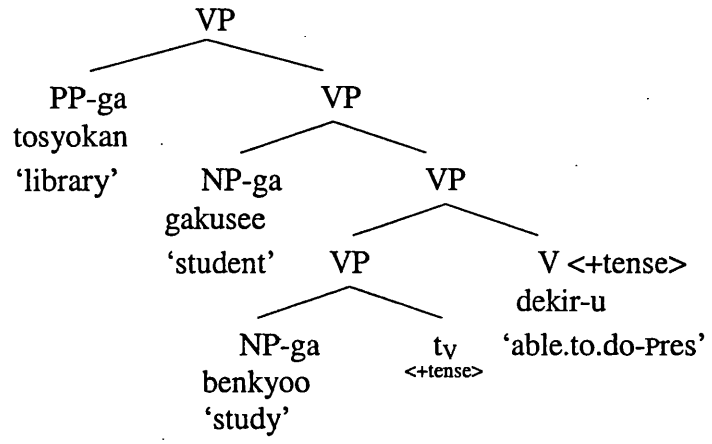


Finally, it is possible for the subject *ga*-phrase of a stative predicate to be preceded by an adjunct *ga*-phrase, as the following example demonstrates.

(26) tosyokan-ga gakusee-ga benkyoo-ga dekir-u
library-GA student-GA study-GA able.to.do-Pres
'It is in the library that students can study.'

The structure proposed for the adjunct multiple nominative construction can be simply carried over to the sentences such as the above. The adjunct *ga*-phrase *tosyokan-ga* 'library-GA' is licensed within the same projection as the subject *ga*-phrase, since the former is not licensed by predication and hence no maximal projection need function as its predicate. As a consequence, structures like the following obtain for the example in (26).

(27)



In sum, multiple *ga*-phrases are not licensed uniformly in either a multiple specifiers or a multiple heads configuration. Which structure is employed depends on the nature of the *ga*-phrase in question. If it is a subject or an external possessor of a subject and thereby is licensed by predication, a multiple heads configuration must be generated, so that it is licensed externally to the maximal projection which functions as its predicate. On the other hand, an adjunct *ga*-phrase is not licensed by predication, hence need not occur in a separate projection. Considerations of economy dictate that a multiple specifier structure should be employed. Finally, an external possessor of a nominative object is licensed as an internal argument of the verb and therefore must be licensed within the projection of the verb, yielding a multiple specifiers configuration.

The existence of multiple heads structure requires that a tensed head undergoes movement in Japanese, since without verb movement, the structure cannot be generated. Evidence for verb movement in this language is extremely difficult to find, since such movement is necessarily string-vacuous. However, I will argue in the next section that there is some evidence for movement of tensed heads in Japanese.

5 Movement of Finite Verbs

The question of whether or not finite verbs undergo movement in Japanese has been and still is a controversial issue.[7,8] Otani & Whitman (1991) first argue for the existence of verb movement in Japanese based on certain interpretations obtained in VP-ellipsis constructions. Hoji (1998), however, demonstrates convincingly that the relevant readings are not due to verb movement. Koizumi (1995, 2000) provides different pieces of evidence for overt verb movement to T in Japanese, yet Fukui & Sakai (2003), Fukushima (2003) and Takano (2002) argue against Koizumi's treatment of the relevant data by providing counterexamples and offering alternative analyses for them assuming no verb movement. In this section, I will argue that the data provided by Koizumi are nevertheless best captured in terms of verb movement, as the alternative analyses face some theoretical and empirical problems.

[7] See Fukui & Sakai (2003) for a comprehensive overview of the literature on the topic of verb movement to T and on functional projections in general in Japanese.

[8] See Nakau (1973) who argues for the presence of movement of non-finite verbs in Japanese.

Koizumi provides three pieces of evidence for verb movement from coordination, long-distance scrambling and cleft constructions. Unfortunately, as Fukui & Sakai note, Koizumi's analysis of the cleft constructions is rather unclear and an alternative analysis suggested by Fukui & Sakai without verb movement seems more plausible. I will therefore not discuss evidence involving the cleft constructions. I will first discuss the remaining two pieces of evidence and then the alternative analyses offered by the aforementioned authors.

Before we move on, it must be noted that although Koizumi does not state explicitly that verbs are inserted into the tree fully inflected, he seems to make this assumption implicitly, as he does not generate the tense morpheme separately under T. Thus, I take Koizumi's evidence for verb movement to T to be evidence for movement of a tensed head.

5.1 Remnant VP movement

A first piece of evidence for overt verb movement involves long-distance scrambling. It is possible to front all or some of the embedded non-verbal elements, as illustrated below.

(28) a. |Hawai-de$_i$ Masami-ni$_j$ purezento-o$_k$| John-ga
Hawai-at Masami-Dat present-Acc John-Nom
[Kiyomi-ga t_i t_j t_k katta to] omotteiru.
Kiyomi-Nom bought that believe
'Lit.: [A present for Masami in Hawaii] John believes that Kiyomi bought.'
(John believes that Kiyomi bought a present for Masami in Hawaii.)

b. |Hawai-de$_i$ Masami-ni$_j$| John-ga
Hawai-at Masami-Dat John-Nom
[Kiyomi-ga t_i t_j purezento-o katta to] omotteiru.
Kiyomi-Nom present-Acc bought that believe

(Koizumi 2000: 240)

Long-distance movement of more than one element from within the same clause necessarily violates Subjacency (Chomsky 1986, Lasnik & Saito 1992). However, in the above examples, no degraded acceptability associated with a Subjacency violation is observed. Furthermore, the fronted elements constitute an intonational phrase, which

is indicative of a single syntactic constituent. Koizumi argues that this syntactic constituent is a remnant VP. The verb moves out of the embedded VP before scrambling of the VP takes place. This verb movement is obligatory, since scrambling the verb along with the other arguments results in ungrammaticality. The sentence in (28a) thus has the following structure (Koizumi 2000: 240).

(29) [$_{VP}$ Hawai-de Masami-ni purezento-o t_v]$_i$ John-ga
Hawaii-at Masami-Dat present-Acc John-Nom
[Kiyomi-ga t_i katta$_v$ to] omotteiru
Kiyomi-Nom bought that believe

Support for this approach comes from observations related to elements which cannot usually undergo movement. Long-distance scrambling of a floating quantifier alone is generally prohibited, as shown in (30a), where it is associated with the embedded direct object *ringo-o* 'apple-Acc'. If the host argument is also scrambled, the sentence is perfect, as in (30b). Interestingly, if the floating quantifier fronted with another embedded argument such as the indirect object, the sentence also becomes grammatical, as illustrated in (30c).

(30) a. *3-tu$_i$ John-ga [$_{CP}$ Mary-ga Bill-ni ringo-o t_i ageta to] omotteiru
3-cl John-Nom Mary-Nom Bill-to apple-Acc gave that] think
'John thinks that Mary gave three apples to Bill.'
b. |ringo-o 3-tu| John-ga [$_{CP}$ Mary-ga Bill-ni ageta to] omotteiru
apple-Acc 3-cl John-Nom Mary-Nom Bill-to gave that] think
c. |Bill-ni 3-tu| John-ga [$_{CP}$ Mary-ga ringo-o ageta to] omotteiru
Bill-to 3-cl John-Nom Mary-Nom apple-Acc gave that] think
(Koizumi 2000: 241-42)

The contrast between (30a) and (30c) can be accounted for, if the fronted elements are contained in a remnant VP in (30c), derived by movement of the verb and the direct object, yielding structures like (31). The trace of the direct object in the fronted remnant VP allows the floating quantifier to have a local antecedent.[9]

[9] This analysis of course leaves the ungrammaticality of the example in (30a) unexplained. It is unclear what prevents all items other than the floating quantifier from moving out of the VP before

(31) [$_{VP}$ Bill-ni t_i 3-tu t_v]$_j$John-ga [$_{CP}$ Mary-ga ringo$_i$-o t_j ageta to] omotteiru
Bill-to 3-cl John-Nom Mary-Nom apple-Acc gave that] think

Similar facts are observed with long-distance scrambling of true adjunct such as *naze* 'why'.

It is impossible to tell whether the verb moves at all in the absence of long-distance scrambling. However, recall from the previous section that a multiple heads structure requires verb movement, as extra structure can be created only if the verb moves and subsequently projects. Thus, the above approach to long-distance scrambling predicts that multiple nominative constructions involving the multiple heads structure must be able to take part in long-distance scrambling of the above type. For instance, it must be possible for a nominative object and its external possessor to be fronted leaving the subject *ga*-phrase and the predicate in the embedded clause. This is predicted, because according to the general condition on predication given in (12), the subject must be licensed in a separate projection headed by the moved verb. As the grammaticality of the following example illustrates, this is indeed true.

(32) ?[$_{VP}$ kono hon-ga naiyoo-ga t_v]$_i$ Bill-wa [John-ga t_i wakaru]-to
this book-GA content-GA Bill-Top John-GA understand-that
omot-ta
think-Past
'Bill thought that John understood the content of this book.'

A possessive multiple nominative construction, which involves a multiple heads structure can also undergo the same movement. However, for independent reasons, it is not possible to strand any *ga*-phrase. Recall from chapter 2 that a possessee cannot be moved to a position higher than its external possessor due to the nature of re-association. No *ga*-phrase can be scrambled out of the projection containing its possessor without occupying a position structurally higher than its possessor. Nevertheless, it is still possible to front all *ga*-phrases without the lexical predicate, as shown below, which would be disallowed, if verb movement was not permitted in this construction.

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scrambling. At present, I have no insightful account for this. See also Fukui & Sakai (2003, footnote 12) for similar comments on the issue.

(33) [kitahankyuu-ga usagi-ga mimi-ga $t_v]_i$ Bill-wa
N.Hemisphere-GA rabbit-GA ear-GA Bill-Top
[kono monogatari-de-wa t_i nagai]-to itta
this story-in-Top long-Comp said
'Bill said that in this story, it is in the Northern Hemisphere where rabbits have long ears.'

A second piece of evidence for verb movement presented by Koizumi concerns coordination. A non-constituent such as [subject, object] or [indirect object, direct object] can be coordinated in Japanese, as (34a-b) illustrate. Furthermore, the coordinated elements can be scrambled, indicating that they form a constituent, as shown in (35) for (34b).

(34) a. [John-ga ringo-o 2-tu] to [Mary-ga banana-o 3-bon]]katta
John-Nom apple-Acc 2-cl and Mary-Nom banana-Acc 3-cl bought
'John bought two apples, and Mary bought three bananas.'
b. Mary-ga [[John-ni ringo-o 2-tu] to [Bob-ni banana-o 3-bon]]
Mary-Nom John-to apple-Acc 2-cl and Bob-to banana-Acc 3-cl
ageta
gave
'Mary gave two apples to John, and three bananas to Bob.'

(35) [[John-ni ringo-o 2-tu] to [Bob-ni banana-o 3-bon]] Mary-ga ageta
John-to apple-Acc 2-cl and Bob-to banana-Acc 3-cl Mary-Nom gave
(Koizumi 2000: 228-231)

It is also possible to coordinate other non-constituents such as [object, locative], [subject, direct object], leaving an indirect object out of the coordination, and [subject, indirect object, direct object]. Koizumi argues that in these cases, the conjuncts are remnant VPs, derived by across-the-board movement of the verb. Thus, the examples in (34) have the following structures, respectively.

(36) a. $[_{TP}\ [_{TP}$ S DO FQ $t_v]$ and $[_{TP}$ S DO FQ $t_v]]$ V-T
b. S $[_{VP}\ [_{VP}$ IO DO $t_v]$ and $[_{VP}\ [_{VP}$ IO DO $t_v]$ V-T

The sentences in (34) cannot be analysed as instances of gapping with the verb in the second conjunct. The possibility of scrambling the coordinated elements without the verb, as in (35), shows that the verb is necessarily outside of the second conjunct.

Verb movement thus seems to take place even when there is no additional *ga*-phrase to license, as in (36a), in which the verb moves to a position higher than the highest *ga*-phrase, the subject. This is also the case in the long-distance scrambling example in (33). It must therefore be motivated even in the absence of a nominative phrase to license. It is not possible to ascertain whether the verb always moves to a position higher than the highest *ga*-phrase. However, as discussed above in connection with long-distance scrambling, those multiple nominative constructions which employ the multiple heads configuration must be able to take part in this kind of coordination. If no verb movement is permitted in these constructions, multiple nominative phrases cannot form a constituent without the verb. The following examples demonstrate that this prediction is borne out. In (37a), the conjuncts each contain a possessive multiple nominative construction, while those in (37b) contain an instance of the stative construction, where both the subject and the object appear in the nominative.

(37) a. [[John-ga imooto-ga 2-ri]-to [Mary-ga itoko-ga 3-nin]]
John-GA sister-GA 2-cl-and Mary-GA cousin-GA 3-cl]
daigakusee-da
university.student-Cop
'John's two sisters and Mary's three cousins are university students.'

b. [[John-GA gengogaku-no hon-GA 1-satu]-to
John-GA linguistics-Gen book-GA 1-cl-and
[Mary-GA rekisi-no hon-GA 2-satu]] wakar-u.
Mary-GA history-Gen book-GA 2-cl understand-Pres
'John understands one linguistics book and Mary two history books.'

Moreover, the coordinated structures can undergo scrambling, demonstrating clearly the constituency of the coordinate structure. Although my informants find the example less than perfect, they consider it still grammatical.

(38) a. ?[[John-ga imooto-ga 2-ri]-to [Mary-ga itoko-ga 3-nin]]$_i$
John-GA sister-GA 2-cl-and Mary-GA cousin-GA 3-cl]
kono monogatari-de-wa t_i daigakusee-da
this story-in-Top university.student-Cop
'According to this story, John's two sisters and Mary's three cousins are university students.'

b. ?[[John-ga gengogaku-no hon-ga 1-satu]-to [Mary-ga
John-GA linguistics-Gen book-GA 1-cl-and Mary-GA
rekisi-no hon-ga 2-satu]]$_i$ kono class-de-wa t_i wakar-u.
history-Gen book-GA 2-cl this class-in-Top understand-Pres
'In this class, John understands one linguistics book and Mary two history books.'

Thus, it seems that there is some evidence for the presence of string vacuous verb movement in Japanese. The existence of verb movement lends further independent support for the approach which employs the multiple heads structure for licensing some types of multiple *ga*-phrases, as the structure predicts such movement.

5.2 Alternative analyses

Takano (2002) and Fukui & Sakai (2003) propose alternative analyses involving no verb movement for the long-distance scrambling and coordination data provided by Koizumi. In this section, I will briefly discuss in turn how the two constructions are explained by the alternatives, pointing out some theoretical and empirical problems with them which are specifically relevant to the present discussion.

5.2.1 Long-distance scrambling

Fukui & Sakai (2003) offer an alternative account of the scrambling examples in (28), one of which is repeated below.

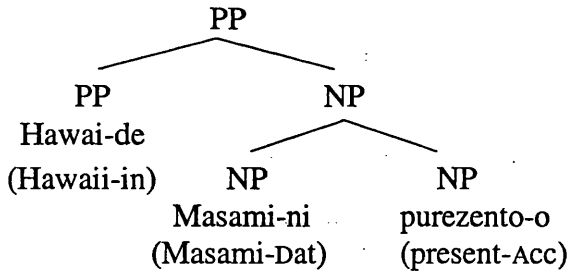
(39) |Hawai-de$_i$ Masami-ni$_j$ purezento-o$_k$| John-ga
Hawai-at Masami-Dat present-Acc John-Nom
[Kiyomi-ga t_i t_j t_k katta to] omotteiru.
Kiyomi-Nom bought that believe

In the spirit of Fukui (1986, 1995), they argue that Japanese is equipped with 'free merger', which allows phrases to be merged freely with an existing phrase, subject to other syntactic and interpretive constraints. This mechanism is available in Japanese due to the absence of active functional categories, i.e. functional categories that induce agreement, which 'close off' projections. Fukui & Sakai argue that 'complex constituents' such as [*Hawai-de Masami-ni prezeunto-o*] 'Hawaii-at Masami-Dat present-Acc' in (28a) are first formed by the process of 'free merger', before undergoing scrambling together as a constituent. Thus, the example in (28a) would presumably have a structure like the following. The ungrammaticality of fronting the floating quantifier alone, as in (30a), is attributed to processing difficulties.

(40) $[_{PP}$ Hawai-de $[_{NP}$ Masami-ni $[_{NP}$ purezento-o$]_k]_j]_i$ John-ga
Hawaii-at Masami-Dat present-Acc John-Nom
$[_{CP}$ Kiyomi-ga t_i t_j t_k katta to] omotteiru.
Kiyomi-Nom bought that believe

There are two problems with this approach. Firstly, it seems that deriving the correct word order involves instances of right-adjunction, as demonstrated below. However, as Japanese is a strictly head-final language, adjunction takes place from the left.[10] The proposed adjunction therefore appears rather unmotivated.

(41)



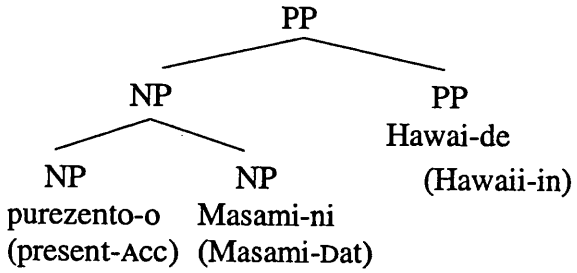
Secondly, the acceptability is degraded if the order among the fronted elements is altered from the neutral order observed in (28a)/(40). Thus, (42) is considerably worse than (28a)/(40).

[10] K.-W. Sohn (1994) argues that it is possible to overtly adjoin an element to an argument from the left or from the right in Japanese and Korean. However, Koizumi (2000) points out empirical problems with this assumption and demonstrates that Sohn's relevant data can be accounted for in his Verb-Raising approach.

(42) ???|purezento-o_k Masami-ni_j Hawai-de_i| John-ga
present-Acc Masami-Dat Hawai-at John-Nom
[Kiyomi-ga t_i t_j t_k katta to] omotteiru.
Kiyomi-Nom bought that believe (Koizumi 2000: 239)

The observed contrast in the acceptability is difficult to capture under Fukui & Sakai's approach. Since the order in (42) would be derived by left-adjunction, the reversed order with structures like the following is in fact the expected order.

(43)



By contrast, under Koizumi's approach, the reversed order in (42) would require extra scrambling of *purezento-o* 'present-Acc' and *Masami-ni* 'Masami-Dat' to a position preceding *Hawai-de* 'Hawaii-in' prior to long-distance scrambling of the remnant VP containing these three phrases, while no movement is required in (39). Thus, I propose that the degraded acceptability results from the application of long-distance scrambling to a constituent in which elements have been scrambled.[11] Let us now consider alternative analyses for the coordination facts

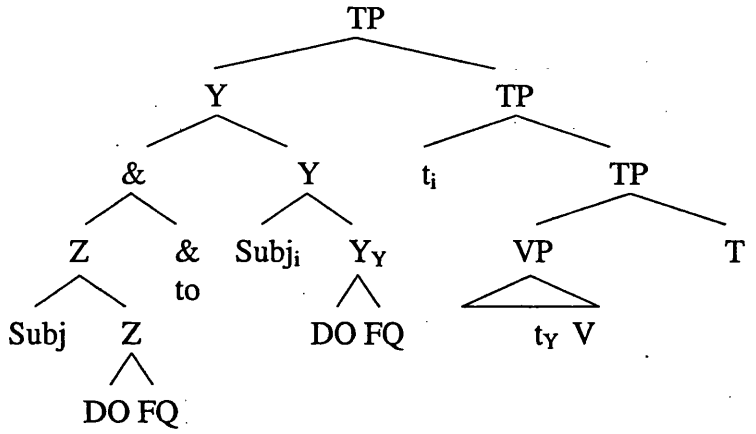
5.2.2 Coordination

Takano (2002) proposes that the whole coordinate structure is one complex phrase formed by scrambling of all the elements, where the phrases are successively adjoined to the last phrase in the second conjunct. Thus, a coordinate structure where each conjunct contains a subject, a direct object and a floating quantifier associated with the direct object, as in (34a), has the structure in (44) and is derived as follows. The direct object and the floating quantifier of the second conjunct, *Y* in the structure, undergo scrambling together and adjoin to TP. The subject of this conjunct then adjoins to the

[11] The question as to why this must be so of course remains to be answered. Although I have no concrete analysis, this may be a language-specific peculiarity, as no comparative degraded acceptability obtains in Korean.

scrambled *Y*. The first conjunct is formed independently by adjoining the subject to the direct object and the floating quantifier, *Z*. This conjunct then adjoins to the coordinator *to* 'and'. Finally, the complex containing the first conjunct adjoins to the second conjunct. Since the whole coordinate structure is one complex phrase, its constituency is expected. The traces are interpreted sloppily, ensuring proper interpretation at LF.

(44)



A number of general theoretical issues arise with this alternative. For instance, it is unclear whether permitting a phrase to adjoin to another phrase in such an unrestricted manner is desirable. However, there is one assumption directly related to the coordinate structure, which is particularly problematic. Although Takano is not entirely clear about whether the direct object or the floating quantifier heads each conjunct, considering that both kinds of constituents are nominal, the implicit assumption seems to be that the conjuncts are nominal projections.[12] It is then predicted that no temporal or VP adverbials should be allowed inside the conjuncts. However, as the following examples demonstrate, this prediction is not borne out. Thus, analysing the conjuncts as nominal elements does not seem to be on the right track.

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[12] Floating quantifiers in Japanese are generally assumed to be nominal elements, as they can bear case-markers and function as arguments on their own, as shown below.

(i) 3-nin-ga kita
3-cl-ga came
'Three (people) came.'

(ii) John-wa sono 2-ri-o nagusame-ta
John-top these 2-cl-Accconsole-Past
'John consoled those two (people).'

(45) [John-ga yukkurito ringo-o 2-tu] to
John-Nom slowly apple-Acc 2-cl and
[Mary-ga isoide banana-o 3-bon]] katta
Mary-Nom quickly banana-Acc 3-cl bought

Another alternative analysis of the coordinate construction has been offered by Fukui & Sakai (2003), who propose an operation called 'Phrase-Level Merger'. This operation reanalyses a sequence of phrase-level units into a constituent in the PF component, provided that they are string adjacent and that the derived constituent complies with the head parameter. When the conjuncts each contain an indirect object and a direct object, as in (34b), they are VPs in the narrow syntax. The verb in the first conjunct is deleted under identity with that in the second conjunct, as shown in (46a). The string [indirect object, direct object] is subsequently reanalysed as an NP in the PF component, as shown in (46b). The verb in the second conjunct also undergoes morphological merger with tense.

(46) a. Narrow Syntax: S $[_{VP}$ IO DO FQ ~~V~~] and $[_{VP}$ IO DO FQ V]
b. After PF reanalysis: S $[_{NP}$ $[_{NP}$ IO DO FQ ~~V~~] and $[_{NP}$ IO DO FQ]] V-T

As in Takano's account, the conjuncts are treated as nominal projections under Fukui & Sakai's analysis. However, the possible occurrence of temporal and VP adverbials inside the conjuncts is not problematic for the latter, since the reanalysis of VP as NP takes place only at PF. Presumably the properties of non-head elements contained in the constituent that undergoes reanalysis are irrelevant for this process.

Nevertheless, the approach faces some theoretical problems. Firstly, it in fact allows an analysis which is indistinguishable from Koizumi's. If a VP with a deleted verb can be reanalysed as an NP, it is unclear how it differs from an analysis in which the second conjunct also contains a deleted verb in the narrow syntax, as indicated by (47a). Unless a deleted verb is somehow distinct from a trace of a moved verb for the purpose of PF reanalysis, the structure in (47a) is identical to a structure in which the verb moves across-the-board to T. In other words, it could be the case that verb movement takes place in the narrow syntax, after which remnant VPs undergo PF reanalysis to form NPs.

(47) a. Narrow Syntax: S [$_{VP}$ IO DO FQ ~~V~~] and [$_{VP}$ IO DO FQ ~~V~~] V-T

b. After PF reanalysis: S [$_{NP}$ [$_{NP}$ IO DO FQ ~~V~~] and [$_{NP}$ IO DO FQ ~~V~~]] V-T

Furthermore, as the authors themselves note, considering that the coordinate structure can be fronted by scrambling and certain such instances of scrambling are sensitive to islands, some island constraints must be operative at PF. It seems highly undesirable, however, to claim that complex constraints based on purely syntactic structure are operative in the PF component, as this component is generally assumed to have little or no access to syntactic information.

In this section, I argued that Koizumi's (1995, 2000) uniform analysis of the data from long-distance scrambling and coordination provided some evidence for the existence of string vacuous movement of the verb in Japanese. Apparent long-distance scrambling of multiple elements from an embedded clause is a result of fronting a remnant embedded VP headed by a trace of the moved verb, rather than fronting of individual elements. Similarly, coordination of apparent non-constituents are in fact coordination of remnant VPs derived by across-the-board movement of the verb.

Alternative analyses by Takano (2002) and Fukui & Sakai (2003), which assume no verb movement, were shown to suffer from theoretical as well as empirical problems. Takano's implicit assumption that the conjuncts are nominal projections is problematic. Fukui & Sakai's analysis, which turns out to be potentially indistinguishable from Koizumi's analysis, must make undesirable assumptions about the PF component. Moreover, the latter must assume right-adjunction in accounting for the data involving long-distance scrambling, a kind which is otherwise not attested in Japanese. Fukui & Sakai in fact provide further data in support for the line of argument that the conjuncts are nominal elements at least at PF and are not derived by movement. I argue in the appendix, however, that the data do not support their position.

Thus, the data provided by Koizumi seem to be best captured in terms of verb movement. In other words, the relevant data provide independent evidence for the existence of movement of finite verbs and hence of the multiple heads configuration, which is derived by recursive movement of a tensed head.

6 Concluding Remarks

In this chapter, I have investigated two possible approaches in which multiple nominative and accusative phrases are licensed. One approach allows recursion in the projection of specifier positions within the maximal projection of the licensing head. The other approach assumes that the licensing head can undergo a potentially recursive operation, self-attachment, whereby it moves and projects, taking the maximal projection of its trace as its complement. Multiple nominative and accusative phrases are licensed in separate projections.

One crucial difference between the two configurations is that the multiple specifiers configuration is the only possible structure under the Universal Base Hypothesis, while the multiple heads structure does not conform to the hypothesis. I argued that there was in fact no motivation for adopting the Universal Base Hypothesis in the theory of grammar. Arguments which have been put forward in its favour are based on questionable assumptions and adopting the hypothesis has undesirable repercussions in other parts of the grammar. Consequently, although the multiple specifiers configuration has been predominantly proposed in the literature particularly for the multiple nominative constructions, there appears to be no reason to employ this configuration exclusively.

I argued that both configurations are in fact required. If a theory allows only one of the two configurations, it must also make an additional assumption to exclude the other. Which configuration is employed depends on the nature of the phrase to be licensed. Specifically, the choice between the two constructions is dictated by the widely held assumptions that only maximal projections can function as predicates and internal arguments are licensed within the maximal projection. Thus, since subjects and external possessors of subjects are licensed by predication, some maximal projection must be identified as their predicates, requiring the multiple heads configuration. On the other hand, adjunct *ga*-phrases and external possessors of an object, whether in nominative or accusative case, are licensed in the multiple specifier positions, as they are not licensed by predication.

Finally, I considered some evidence for the existence of string vacuous movement of a tensed head in Japanese, a prediction made by the multiple heads configuration. Data from coordination and long-distance scrambling provided independent evidence that finite verbs undergo such movement.

Appendix: Fukui & Sakai's (2003) apparent counterexamples to Koizumi's (1995, 2000) verb movement analysis

Fukui & Sakai (2003) put forward four sets of data as counterexamples to Koizumi's analysis of coordination in terms of verb movement. They involve, coordination with the particle *mo* 'also', the apparent possibility of case-marking the coordinate structure, coordination with the coordinator *katu* and coordination of conjuncts containing arguments from matrix and non-finite embedded clauses. In this appendix, I will consider the former two sets of data, which I consider may seem more problematic for Koizumi's analysis.

1 *mo*, 'also'

A first set of data involves the connective particle *mo* 'also'. Like *to* 'and', *mo* can conjoin two nominal elements, as the following examples show. *To* can appear optionally on the second conjunct.

(1) a. Taroo-ga ringo-to banana-(to)-o tabe-ta.
Taroo-Nom apple-and banana-(and)-Acc ate
'Taro ate apples and bananas.'
b. Taroo-ga ringo-mo banana-mo tabe-ta.
Taroo-Nom apple-also banana-also ate (Fukui & Sakai 2003: 343)

However, unlike *to*, *mo* cannot coordinate two conjuncts each containing an indirect object and a direct object. The contrast is illustrated below.

(2) Taroo-ga [Hanako-ni ringo-o 3-tu]-to/*mo
Taro-Nom Hanako-Dat apple-Acc 3-cl-and
[Kumiko-ni banana-o 2-hon](-to)/*mo ageta
Kumiko-Dat banana-Acc 2-cl-and gave (Fukui & Sakai 2003: 344)
'Taro gave three apples to Hanako and two bananas to Kumiko.'

Given the similarity between *to* and *mo*, observed in (1), Fukui & Sakai argue that if movement of the verb were responsible for the constituency of the conjuncts in (2), it is strange that the coordination is ungrammatical with *mo*. Moreover, *mo* can

coordinate two conjuncts containing verbal stems and the verbs need not be identical, as demonstrated below.[13]

(3) Sono hi-ni Taroo-wa [hon-o 5-satu yomi] mo
that day-on Taro-Top book-Acc 5-cl read also
[sake-o 4-hon nomi] mo si-ta.
sake-Acc 4-cl drink also did (Fukui & Sakai 2003: 344)
'On that day, Taro read five books and (also) drank four bottles of sake.'

Fukui & Sakai provide an account for the contrast in (2), in which they claim that *mo* has its own semantic content, thus must be present in the LF representation. Consequently, a coordinate structure with *mo* must be formed in the narrow syntax. This explains why *mo* cannot conjoin two non-constituents each containing an indirect object and a direct object, since they are syntactically not a constituent. On the other hand, *to* lacks a comparable semantic content. It can therefore coordinate conjuncts which are not syntactic constituents, but are PF constituents after reanalysis. It is questionable, however, whether *to* really does not have a semantic content, since it can affect the interpretation of a sentence. In particular, when *to* occurs on both conjuncts, as in (1a) and (2a), the coordinated elements are interpreted as focused. It is therefore unclear whether the contrast between *mo* and *to* can be reduced to the difference in their semantics.

At first sight, the data in (2) and (3) seem indeed problematic for the idea that the conjuncts are derived by across-the-board movement of the verb. However, a closer investigation reveals that, although Fukui & Sakai claim that *mo* is a connective particle, there are reasons to believe that it is not. *Mo* is generally referred to in the literature as a 'focus particle', rather than a connective particle, and grouped together with other quantificational particles such as *dake* 'only' and *sae* 'even' (cf. Kuroda 1965, Aoyagi 1998). Characterizing *mo* as a focus particle appears to be more accurate for two reasons. Firstly, the presence of a second conjunct is not obligatory in the putative *mo*-coordination. Secondly, when there is a second conjunct, as Fukui & Sakai note, the appearance of *mo* on the second conjunct is obligatory. These

[13] Although Fukui & Sakai claim that the conjuncts in (3) are headed by verbal stems, the verbs are in fact in a form traditionally know as *renyookei*. I will refer to this form as the non-finite form in the text.

observations suggest that *mo* is modifying the 'conjuncts' rather than coordinating them. By contrast, *to* requires the presence of a second conjunct, but its appearance on the second conjunct is optional. This is demonstrated below. Thus, despite the superficial similarity observed in (1), *mo* does not appear to be a connective particle like *to*.

(4) a. Taroo-ga ringo-to *(banana(-to)-o) tabe-ta.
Taroo-Nom apple-and banana-and-Acc ate
'Taro ate apples.'

b. Taroo-ga ringo-mo (banana-*(mo)/*o) tabe-ta.
Taroo-Nom apple-also banana-also/Acc ate
'Taro ate apples too.'

If *mo* is a focus particle, it is conceivable that it can modify VPs and that when it does, it selects the verb in the non-finite form with the effect that the dummy do *su-* is inserted under T in order to realise the tense morphology.[14] I propose that what have been coordinated in (3) are in fact TPs and that the dummy do plus the tense morpheme *si-ta* 'do-Past' has undergone across-the-board movement, yielding structures like the following for the example in (3).

(5) S $[_{TP}\ t_S\ [_{VP}$ IO DO FQ V-non-fin.]-mo $t_T]$(&)$[_{TP}\ t_S\ [_{VP}$ IO DO FQ V-non-fin.]-mo $t_T]$ did_T

This approach explains why *mo* cannot coordinate two sets of indirect object and direct object as in (2b). The sentence is ungrammatical, because what *mo* is attached to are not VPs which are headed by non-finite verbs. The structure in (5) predicts that the conjuncts cannot contain temporal adverbials referring to distinct points in time. This is because features in T must be identical for across-the-board movement to be grammatical. The following example shows that this prediction is indeed correct.

(6) *[Taroo-ga kinoo-wa uta-i-mo] (sosite)
Taro-Nom yesterday-Top sing-Non.fin.-also and
[Ziroo-ga kyoo-wa odor-i-mo] sita
Ziroo-GA today-Top dance-Non.fin.-also did

'Taro sang yesterday and Ziro dances today.'

For concreteness, I propose that when there is more than one NP with *mo*, it is an instance of NP-coordination with a null coordinator, as shown below. The idea of a covert coordinator is not so strange, since in numerous other languages including English, a coordinator is often overtly realised only before the last conjunct.

(7) Taroo-ga [[$_{NP}$[ringo]-mo] Ø [$_{NP}$[banana]-mo]] tabe-ta.
Taroo-Nom apple-also (and) banana-also eat-Past
(Ø = a null coordinator)

Thus, *mo* is not a connective particle like *to*, and when it attaches to VP, it selects the verb in the non-finite form. Consequently, the issue of finite verb movement is irrelevant in this *mo*-coordination.

2 Case particles

Another piece of evidence against an analysis of coordination in terms of verb movement comes from the observation that case can apparently be assigned to the coordinated structure as a whole, as the following example demonstrates.[15] Fukui & Sakai argue that the conjuncts cannot be remnant VPs derived by verb movement, since case particles do not attach to VPs in Japanese. They claim that case assignment takes place after PF reanalysis. Since the conjuncts are reanalysed as NPs, the coordinate structure as a whole can bear case.

(8) Taroo-ga [[Hanako-ni ringo 3-tu] to
Taro-Nom Hanako-Dat apple 3-cl and
[Kumiko-ni banana 2-hon (to)]]-o ageta
Kumiko-Dat banana 2-cl and-Acc gave (Fukui & Sakai 2003: 345)
'Taro gave [three apples to Hanako] and [two bananas to Kumiko].'

It is interesting to note that in contrast to Koizumi's examples and other examples of coordination Fukui & Sakai consider, the accusative case marker *o* has

[14] I claimed in this chapter that there is no TP in Japanese, but since Fukui & Sakai postulate it in their discussion, I will assume it here.

[15] Fukui & Sakai provide examples illustrating the same point for nominative case. I will restrict the discussion in this section to accusative case, but it also applies to instances with nominative case.

been dropped from the objects inside the conjuncts in the above examples.[16] It is possible to realise the case markers on the relevant constituents in the first conjunct, but not in the second conjunct, as illustrated below.

(9) Taroo-ga [[Hanako-ni ringo-o 3-tu] to
Taro-Nom Hanako-Dat apple-Acc 3-cl and
[Kumiko-ni banana(-*o) 2-hon (to)]]-o ageta
Kumiko-Dat banana-Acc 2-cl and-Acc gave
'Taro gave [three apples to Hanako] and [two bananas to Kumiko].'

Regardless of whether the direct object in the first conjunct bears *o*, there seem to be potentially three elements on which *o* can be realised in the second part of the coordination. These elements are the direct object *banana*, the floating quantifier *2-hon* '2-cl' and the coordinator *to* 'and'. There are however some restrictions on its distribution. This is schematically illustrated below in (10). Firstly, as we already saw in (8), it can appear on *to*, in which case, it cannot also appear on *banana* or *2-hon*. Secondly, it can be realised on *banana*, if it does not also appear on *to* or *2-hon*. Finally, it can be realised on *2-hon* if *to* on the second conjunct is absent and if it is not realised on *banana*.[17] Recall that *to* on the second conjunct is optional.

(10) a. banana(*-o) 2-hon(*-o) to-o
banana-Acc 2-cl-Acc and-Acc
b. banana-o 2-hon(*-o) to(*-o)
c. banana(*-o) 2-hon-o (*to(*-o))

[16] It is generally possible to drop case markers in Japanese provided that there is no intervening argument between the relevant NP and the verb. See Fukuda (1993) and Toyoshima (1998) for further discussion.

[17] In Japanese, an argument and an associated numeral classifier may be realised in one of the following three forms. The classifier may precede the host noun, in which case it bears genitive case and forms a constituent with the noun, as in (i). It may follow the noun and bear case, still forming a constituent with the host noun, as in (ii). Finally, it may float and be realised as a distinct constituent lower in the structure, in which case the host noun must bear case.

(i) [N.Cl-gen NP]-case (ii) [NP N.Cl]-case (iii) NP-case ... N.Cl

A generalisation that emerges is that the accusative case marker can appear only once on one of the three elements and *to* must attach directly to a floating quantifier, disallowing a case marker to appear on the floating quantifier. A case marker is usually prohibited from appearing in a position immediately preceding *to*. Koizumi observes, *to* has a requirement to be realised on a nominal-like element. Even in a simple NP-coordination, case on the first NP cannot be overtly realised and when *to* on the second conjunct is realised, the case marker must follow *to*. This is illustrated below for nominative case and accusative case.

(11) a. [John (*-ga)-to(*-ga) Mary(*-ga)(-to)-ga paatii-ni kita.
John-Nom-and Mary-and-Nom party-to came
'John and Mary came to the party.'

b. John-wa ringo(*-o)-to(*-o) banana(*-o)(-to)-o tabeta.
John-Top apple-Acc-and banana-Acc-and-Acc ate.
'John ate apples and bananas.

The fact that the realisation of *o* in a position following *to*, as in (10a), is in a complementary distribution with that on the host NP, as in (10b), suggests that *o* following *to* is an instance of the realisation of accusative case on the direct object in the second conjunct, rather than that of accusative case on the whole coordinated elements, as argued by Fukui & Sakai. I propose, therefore, that as far as syntax is concerned, *o* following *to* belongs to the floating quantifier in the second conjunct, but is realised in a position following *to*, due to a phonological constraint on the order of particles. Such mismatch between syntax and phonology/morphology is not rare. It is found for example in English *–er* nominalization with particle verbs. Thus, a person who passes by is realised as *[[pass]-er by]*, although as far as syntax is concerned, it should be *[pass by]-er*. Similarly, someone who picks up something is realised as *[[pick]-er [upp]-er]*, while the meaning suggests *[pick up]-er*. (cf. Ackema & Neeleman 2004, see also Schütze (1994), who makes similar observations regarding clitics)

This approach to the apparent case marking of the coordinated elements is perfectly compatible with the analysis that the conjuncts are remnant VPs. I propose the following structure for the example in (8).

(12) Taroo-ga [[$_{VP}$ Hanako-ni ringo(-o) 3-tu t_v] to
Taro-Nom Hanako-Dat apple-Acc 3-cl and
[$_{VP}$ Kumiko-ni banana 2-hon t_v]-(to)-o] $geta_v$
Kumiko-Dat banana 2-cl and-Acc gave
'Taro gave [three apples to Hanako] and [two bananas to Kumiko].'

Thus, data such as (8), where the case marker appears externally to the conjunct, do not demonstrate that the conjuncts are NPs rather than remnant VPs. The case marker in question belongs to the floating quantifier inside the second conjunct, but cannot appear in a position preceding *to*, as *to* must attach to a nominal-like element. As a consequence, the case marker is phonologically realised outside of *to*, although syntactically, it occupies a position internally to the conjunct. The relevant data therefore do not constitute counterexamples to the analysis that conjuncts are remnant VPs.

Fukui & Sakai present two further arguments against Koizumi's approach. A first involves another coordinator *katu*. Like coordination with *mo*, verbs remain in the conjuncts. The other concerns a construction in which *to* coordinates conjuncts consisting of arguments from the matrix and embedded clauses, where the embedded verb is non-finite, but is clearly separated from the matrix verb by an adverb. I believe that *katu*-coordination can be explained in a similar manner to coordination with *mo* and that coordination of arguments from matrix and embedded clauses involves across-the-board movement of the matrix verb, which licenses further ellipsis of its dependents in the conjuncts in the sense of Williams (1997) and Ackema and Szendrői (2002).

In sum, the coordination data provided by Fukui & Sakai can be given alternative explanations and do not seem to constitute evidence against Koizumi's approach in terms of verb movement. The particle *mo* 'also' is a focus marker and not a connective particle like *to* 'and'. When attached to a VP, it selects the verb in the non-finite form. The case marker which seems to mark the whole coordinate structure in fact belongs syntactically to the object in the second conjunct. It is realised externally to the coordinate structure due to the phonological constraint that *to* must attach to a nominal-like element.

Chapter 6
Conclusion

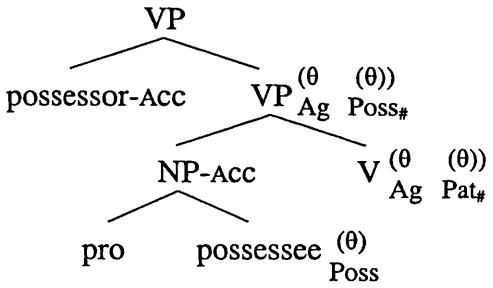
1 Summary

In this thesis I sought to provide a uniform account of the phenomenon of external possession in Japanese and Korean. I argued that a universally available operation called 're-association' allows a semantic argument of another argument to be licensed as a syntactic argument of the verb at the clausal level.

The core of the operation of re-association was developed in Chapter 1. The operation allows a θ-role assigned to an argument to be dissociated from its semantics and be re-associated with appropriate semantics present in that argument. Semantics is appropriate for re-association, if it contains a variable and is of the kind that can function as an argument in a predicate's lexical conceptual structure, such as *Agent* and *Patient*. The re-associated θ-role is subsequently assigned by the verb to another constituent at the clausal level. As a result, this constituent is licensed syntactically as an argument of the verb, but is semantically construed as an argument of another argument.

In the case of external possession, I proposed that the possessee argument contains a resumptive *pro* internally to the projection it heads. The possessee can assign a θ-role to the *pro*, but the semantics associated with the θ-role, namely *Possessor*, will still contain a variable, since *pro* is a variable in the semantics. Consequently, semantics appropriate for re-association becomes available in the possessee. The re-associated θ-role is assigned by the verb to the external possessor, which is base-generated as a distinct constituent at the clausal level. This ensures its syntactic status as an argument of the verb and its semantic interpretation as a possessor of another argument. The following structure illustrates the licensing of an external possessor of an object.

(1)



In Chapter 2, the operation was applied to the possessive multiple nominative construction in Japanese, in which a possessor of a nominative subject is realised in the nominative externally to the projection headed by the subject. In this construction, the θ-role assigned to the verb's external argument undergoes re-association. Thus, the re-associated θ-role assigned to the external possessor is an external θ-role, explaining the widely noted observation that it behaves like a subject. I demonstrated that reference to θ-roles in the operation deriving the construction was crucial in accounting for various restrictions on the nature of the external possessor as well as the possessee.

In the ensuing two chapters, the possessive multiple nominative construction was then contrasted in two aspects with different constructions. Chapter 3 examined other types of multiple nominative constructions in Japanese: the adjunct multiple nominative construction and the stative construction. I showed that re-association is not required to license every kind of multiple nominative construction and proposed separate analyses for the two constructions. Moreover, I proposed an interpretational rule concerning focus, which provided a uniform account of the obligatory focus reading of the first *ga*-phrase in all the three types of multiple nominative constructions.

In Chapter 4, the possessive multiple nominative construction was contrasted with an instance of external possession in Korean, in which a possessor of an accusative object appears in the accusative externally to the object. I showed that the construction can also be accounted for straightforwardly in terms of re-association. A θ-role assigned to the accusative object undergoes re-association and a base-generated external possessor is assigned the re-associated θ-role by the verb. The fact that an affected reading obligatorily obtains for an external possessor of an object, but not for that of a subject, was shown to follow from the difference in the grammatical function of the possessee.

Finally, in Chapter 5, I discussed some theoretical implications of licensing multiple phrases bearing identical case-marking. There are *a priori* two possible licensing configurations, one involving multiple specifier positions within one

maximal projection, while the other contains multiple copies of the licensing head. I argued that only the multiple specifiers configuration conformed to the Universal Base Hypothesis, but that there was in fact no compelling reason for incorporation of this hypothesis into the theory of grammar. I subsequently concluded that both constructions were required and the nature of the phrase to be licensed determined which configuration is employed. Implications of this approach for the presence of verb movement in Japanese were also discussed.

There are some related issues which may suggest directions for future research. In particular, implications of the claim that re-association is universally available could be elucidated in two respects. Firstly, the typology of external possession, and more precisely the rarity of multiple nominative and accusative constructions among the world's languages as forms of external possession, could perhaps be offered in terms of Case-theory. Secondly, the domain of application of re-association could be explored, since there are other instances which appear to be easily explained in terms of re-association, most notably light verb constructions in Italian. In the remainder of this chapter, I will offer some speculations on these issues in turn.

2 Cross-linguistic Variation in External Possession

I argued in this dissertation that the operation of re-association is available universally. If this is indeed the case, why is external possession not attested in every language in the forms attested in Japanese and Korean? I suggest that the phenomenon of external possession itself is universal, but its form is perhaps determined by case properties of each language.[1] Thus, languages which disallow multiple occurrences of nominative and accusative phrases do not license external possessors in the nominative and the accusative.

Initial support for this suggestion comes from the observation that in Japanese, for which, as we saw, re-association is evidently operative, an external possessor of an object is not permitted in the accusative. This is because multiple accusative phrases are independently prohibited by the so-called 'Double *O* Constraint' (Harada 1973). However, as we witnessed in Chapter 3, when case is available, namely when the object appears in the nominative, a possessor of the object may be realised externally.

[1] Yoon (1989, 1990) makes a similar suggestion.

Furthermore, we observed in Chapter 1 that languages such as Hebrew, German and Spanish make available dative Case for the purpose of marking an extra argument, permitting a possessor of an object to appear in the dative. External possession involving direct object seems to be the most attested type (Payne & Barshi 1999). Thus, if a language has an appropriate means to license an additional argument in the clause, external possession seems to be possible.

However, the question still remains regarding the remarkable rarity among the world's languages of multiple nominative or accusative constructions as forms of external possession. Here, I will make some speculations as to whether the possibility of the constructions can be linked to some other peculiarities of the languages that permit them.

To the best of my knowledge, Korean is the only language that permits both external possessor and the possessee to be marked with accusative case. Korean also has the rare property of allowing both indirect object and direct object of a ditransitive verb to be realised in the accusative. Obviously, the language independently allows two internal arguments to be marked in the same case. Since external possessors behave like arguments of the verb, it is perhaps to be expected that those that are related to accusative objects can be marked in the accusative.

Multiple nominative constructions are also rarely attested. Besides Japanese and Korean, Modern Standard Arabic and Chickasaw, a Western Muskogean language, exhibit external possession by means of multiple nominative phrases, as the following examples illustrate. Moreover, in these languages, the nominative external possessors exhibit subject-like properties (cf. Doron 1996, Doron & Heycock 1999 for Modern Standard Arabic; Munro & Gordon 1982, Munro 1999 for Chickasaw)

(2) *Modern Standard Arabic*

a. xalid-un ra?aa sadiiq-u-hu saalim-an
Khalid-Nom saw friend-Nom-his Salim-Acc
'Khalid, his friend saw Salim.' (Demirdache 1989: 1)

b. hind-un sadiiq-u-haa kaana y-aktubu al-al-kitaab-an
Hind-Nom friend-Nom-her was.3MS 3MS-write.IMP the-book-Acc
'Hind, her friend was writing the book.'

(3) *Chickasaw*[2]

a. Jan-at oblaashaash ofi'-at im-illi-tok
Jan-Nom yesterday dog-Nom Dat-die-Perf
'Jan's dog died yesterday.'

b. Brenda-at ishkin-at lakna
Brenda-Nom eye-Nom be.brown
'Brenda's eyes are brown.' (Munro 1999: 256-257)

Interestingly, there are several further similarities between the multiple nominative constructions in Modern Standard Arabic, Chickasaw, Japanese and Korean. Firstly, all these languages permit an indefinitely large number of possessive nominative phrases, as demonstrated below. We have already seen this property for Japanese in Chapter 2. Modern Standard Arabic is a VSO language, which permits elements to be fronted to pre-verbal positions. Chickasaw is basically an SOV language which allows relatively unrestricted movements of the elements.

(4) *Japanese*

kitahankyuu-ga anettai-ga usagi-ga mimi-ga naga-i.
N.Hemisphere-GA subtropics-GA rabbit-GA ear-GA long-PRES
'It is the Northern Hemisphere, where rabbits in the subtropics have long ears.'

(5) *Korean*

mwunmeyngkuka-ka namca-ka swumeyng-i kil-ta
developed country-Nom male-Nom life-span-Nom long-DECL
'As for developed countries, as for males, their life-span is long.'
(Heycock & Lee 1989: 782)

(6) *Modern Standard Arabic*

xaalid-un$_i$ uxt-u$_j$-hu$_i$ sadiiq-u-haa$_j$ ra?aa saalim-an
Khalid-Nom sister-Nom-his friend-Nom-her saw Salim-Acc
'Khalid, his sister's friend saw Salim.'

[2] When the possession relation expressed is alienable, either the possessee or the predicate is marked with the dative prefix *im-* in addition to the nominative case marker on the possessee, while when it is inalienable, no extra marking is required.

(7) *Chickasaw*

Jan-at in-kan-aat im-ofi'-at
Jan-Nom Dat-friend-Nom Dat-dog-Nom
iyy-aat hishi'-at ibiitop-at lowa-tok
leg-Nom hair-Nom end-Nom burn-Perf
'The ends of the hair on Jan's friend's dog's legs are burnt.' (Munro 1999: 268)

Secondly, the four languages all have constructions in which a non-subject argument is marked with nominative case. Again, we have already seen this characteristic for Japanese in the stative construction examined in Chapter 3. Korean exhibits a similar construction in which the object appears in the nominative, while the subject can bear the nominative case marker or the dative case marker or both, as shown by the example (9), a property also of the Japanese stative construction.[3] The Modern Standard Arabic and Chickasaw examples in (10) and (11) show that accusative objects may be fronted and be marked with nominative case. Although fronted nominative objects in Modern Standard Arabic have traditionally been analysed as an instance of left-dislocation (Demirdache 1989, Fassi Fehri 1993), there seems to be some evidence that they are licensed clause-internally (Doron & Heycock 1999). For Chickasaw, Munro (1984, 1999) has claimed that fronted nominative objects assume syntactic subject status.

(8) *Japanese*

John-ga nihongo-ga wakar-u.
John-GA Japanese-GA understand-Pres
'It is John who understands Japanese.' (Takezawa 1987:24)

(9) *Korean*

haksaeng-til-eyekey/-i/-eykey-ka ton-i philyoha-ta
student-Pl-Dat /-Nom/-Dat-Nom money-Nom need-Decl
'The students need money.' (Gerdts & Youn 1988: 160)

[3] In addition, Korean allows adjuncts to be marked with the nominative case marker *ka/i*, as in the Japanese adjunct multiple nominative construction. See Whitman (2000), Schütze (2001) and Yoon (2004) for further discussion.

(10) *Modern Standard Arabic*

a. yuqa:bilu T-Tulla:b-u hind-an
meet(3M) the-students(M)-Nom Hind(F)-Acc
'The students are meeting Hind.'

b. hind-un yuqa:bilu-ha T-Tulla:b-u (Doron & Heycock 1999: 70)
Hind(F)-Nom meet(3M)-her the-students(M)-Nom

(11) *Chickasaw*

a. Chihoow-aat ihoo-a im-oktani-tok
God-Nom woman-Acc Dat-appear-Perf
'God appeared to the woman.'

b. Ihoo-at Chihoow-aat im-oktani-tok
woman-Nom God-Nom Dat-appear-Perf (Munro 1999: 263)

A third similarity shared at least by three of the languages is that pronouns need not be spelled out. More precisely, Japanese, Korean and Chickasaw are radical *pro*-drop languages in the sense that pronouns are seldom expressed, regardless of their grammatical function in the sentence.[4] This property was demonstrated for Japanese and Korean in Chapters 2 and 4, respectively. Munro (1999) reports that Chickasaw pronouns are also rarely overt. Thus, given an appropriate context, the following example is perfectly grammatical.

(12) *Chickasaw*

Liyohli
chase
'It/he/she is chasing it/he/she.' (Munro 1999: 252)

[4] The situation in Modern Standard Arabic is more complicated. Predicates show enriched agreement when arguments are null, which has led some researchers to conclude that Modern Standard Arabic and some dialects of Arabic, such as Moroccan Arabic, are *pro*-drop languages of the Italian type. Fassi Fehri (1993) argues, however, that at least in Modern Standard Arabic, pronouns in fact are incorporated into the verb in such instances rather than realised as null.

Finally, all the four languages have a distinct, non-fusional, particle for nominative case, which is cross-linguistically extremely uncommon. This is illustrated below by the case-paradigms for the four languages.

(13) *Case paradigms*[5]

	Japanese	Korean	Chickasaw	Modern Standard Arabic
nominative:	-ga	-ka/i	-at	-u
accusative:	-o	-lul/ul	-a	-a
dative:	-ni	-ey/eykey	-ak	--
genitive:	-no	-uy	--	-i

One possible generalisation which emerges from the above observations is that a separate particle for nominative case in a language is a prerequisite for allowing the occurrence of multiple nominative constructions in that language. [6] If this generalisation is correct, it explains the non-existence of multiple nominative constructions in most of the world's languages, since cross-linguistically, nominative case is rarely expressed by a separate particle. The radical *pro*-drop nature of three of the languages may also be correlated with the fact that cases are expressed by distinct particles in these languages. Neeleman & Szendrői (2004) claim that a language must exhibit radical *pro*-drop if pronominals have invariant forms across all cases and case particles simply attach to them.

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[5] DP-internal possessors in Chickasaw are unmarked and the dative case marker has been described as a marker for oblique case in the literature (Munro & Willmond 1994). Modern Standard Arabic lacks a marker for dative case. Prepositions are used to mark arguments in relevant contexts instead (cf. Fassi Fehri 1993).

[6] Heycock & Doron (2003) argue that Hebrew also exhibits a multiple nominative construction, as shown in (i).

(i) im be'emet dani ha-xavera Selo mi-carfat, ex ze Se hu af pa'amlo haya Sam
if really Dani the-girlfriend his from-France how it that he never not was there
'If indeed Dani's girlfriend is from France, how come he was never there?' (Heycock & Doron 2003: 97)

Hebrew does not have a distinct marker for nominative case and therefore appears to be one counterexample for the proposed generalisation.

3 Extending Re-association

Let us now consider what other types of constructions may be explained in terms of re-association. If re-association is indeed a universally available operation, it is expected that its domain of application would not be limited to external possession. In this section, I suggest that it might be extended to light verb constructions in Italian.

Samek-Lodovici (2003) observes that in Italian light verb constructions, there is a correlation between the number of arguments a deverbal noun has and the choice of the light verb selected. Thus, if a deverbal noun has two thematic arguments, the light verb, *dare*, whose heavy counterpart means 'to give' and licenses three arguments, is chosen, while if the noun has one thematic argument, the light verb, *fare*, whose heavy counterpart has the meaning 'to make' and has two arguments, is selected. The point is illustrated below. In (14a), the deverbal noun, *strizzata* 'squeezing', has two arguments, an agent and a theme, and the light verb *dare* must act as the light verb. On the other hand, in (14b), the deverbal noun *risata* has an unergative verb as its base, licensing only one argument, and the light verb *fare* must be selected.

(14) a. I ragazzi hanno dato/*fatto una strizzata ai panni
the boys have given/made a squeezing to-the clothes
'The boys squeezed the clothes.'

b. Gianni ha fatto/*dato una risata
John has made/given a laughing
'John laughed.' (Samek-Lodovici 2003: 853)

Samek-Lodovici offers an analysis based on thematic operations rather similar to re-association. Briefly, he argues that variables in the argument structure are associated with variables in the lexical conceptual structure (LCS) of the predicate by LCS-links, which are represented as indices on the variables. Thus, a verb like *freeze* has an argument structure and an LCS-representation like the following.

(15) a. freeze (x_i (y_j))

b. LCS: CAUSE (W_i, (BECOME (Z_j, ICE)))

Light verb formation involves an operation called *index erasure*, where the indices on the variables in the argument structure are erased, as shown below for the verb *dare*. The resultant structure retains the valency of the predicate, but not the meaning associated with each argument variable.

(16) *Index erasure*

a. Before: dare (u_i (v_j (w_k)))

b. After: $dare_{light}$ (u (v (w)))

The above light verb then combines with a deverbal noun, and by the operation of *index transfer*, the indices of the argument variables in the noun's argument structure are transferred to the index-less variables in (16b). The process is illustrated below for the example in (14a). Samek-Lodovici claims that nominalization involves suppression of the external argument of the base verb, indicated by angled brackets on the relevant variable, and insertion of an event-referring argument, which acts as the external argument of the derived nominal. The event index is always transferred to the least prominent argument variable in the light verb's argument structure, which is assigned to the deverbal nominal.

(17) *Index transfer*

a. Before: $dare_{light}$ (u (v (w))) + strizzata (z_{ev} (<x>$_i$ (y_j)))

b. After: $dare_{light}$ (u_i (v_j (w_{ev}))) + strizzata (z_{ev} (<x>$_i$ (y_j)))

A deverbal noun which has only two argument variables such as *risata* 'laughing', one event-referring and one thematic, cannot combine with the light verb *dare*. This is because the light verb's argument structure contains three index-less variables, yet the noun has only two variables, leaving one of the verb's argument variables index-less and hence uninterpretable. Since the light verb retains the argument structure, the observed correlation between the valency of the deverbal noun and the choice of the light verb follows naturally from this analysis.

However, a potential problem arises from the idea that the deverbal noun retains its argument structure and the associated LCS after index-transfer. It is unclear how arguments of the noun can be prevented from being realised twice, once DP-internally, and once as syntactic arguments of the light verb. Such sentence is ungrammatical, as demonstrated below in (18a), where the internal argument of the deverbal noun is realised internally to the projection headed by the noun, as well as externally to the noun. The sentence remains ungrammatical even if one of the arguments is realised as the dative clitic *gli*, avoiding any oddity in repeating the same lexical item, as shown in (18b).

(18) a. *Gianni ha dato [una strizzata dei panni] ai panni
John have given a squeezing of-the clothes to-the clothes
'John squeezed the clothes.'

b. *Gianni gli ha dato [una strizzata dei panni]
John to-them have given a squeezing of-the clothes

An alternative analysis of the construction may be offered in terms of re-association, which would retain the attractive part of Samek-Lodovici's analysis, while avoiding the above potential problem. It is well-known that nouns need not always realise their arguments (Grimshaw 1990). Thus, the following example implies that there is someone or something that washes and something that is washed.

(19) We always leave the washing until we run out of clean clothes.

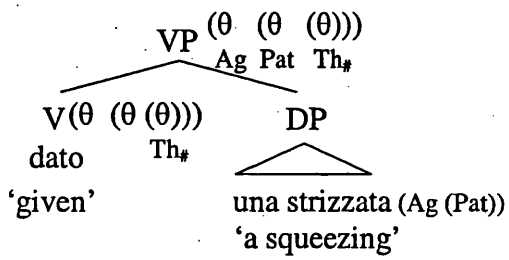
This observation suggests that the noun's θ-grid need not be present in the syntax, as the arguments are not syntactically realised. However, the noun's lexical conceptual structure must be accessible in the above example, since the referents of the arguments are clearly provided by the context.

Perhaps, another way of providing referents for the arguments is in terms of re-association. In terms of the theory developed in this thesis, when arguments of a noun are not realised DP-internally, semantics corresponding to each argument contains a variable. Such semantics is appropriate for re-association. Moreover, Samek-Lodovici's index-erasure in light verb formation can be translated into the present framework as dissociation of semantics from θ-roles. Considering that languages

permit only few verbs to function as light verbs and the choice of the verbs is language-specific, this kind of dissociation must be relatively restricted.

In particular, desired effects with respect to the Italian constructions seem to follow if we assume that all θ-roles but the least prominent in the verb's θ-grid are dissociated from their semantics. The least prominent θ-role is then assigned to the deverbal noun, licensing it as an argument of the verb, and the other dissociated θ-role are re-associated with semantics contained in the noun. Thus, the example in (14a) might have representations like the following. The semantics associated with the least prominent θ-role in the resulting θ-grid on VP, namely *Theme*, is part of the lexical meaning of the verb, while the semantics associated with the other two θ-roles, *Agent* and *Patient*, are part of the lexical meaning of the noun.

(20)



The potential problem of realising the noun's arguments twice does not arise under the re-association approach. Since the noun's semantic arguments are not linked to θ-roles, they cannot be realised internally to the noun's projection, accounting for the ungrammaticality of the examples in (18).

There are obviously some repercussions of extending re-association to this type of light verb constructions. One consequence is that the definition of re-association as proposed in Chapter 1, repeated below, must be reformulated.

(21) *Re-association*

A θ-role can be re-associated with appropriate semantics contained in an argument that satisfies it.

In the light verb constructions, the θ-role assigned to the deverbal noun does not undergo re-association. It is the other θ-roles in the same θ-grid that are re-associated with variable-containing semantics. Thus, when an argument containing appropriate semantics is licensed, re-association does not appear to be limited to the θ-role which

is assigned to the argument. It can also affect other θ-roles in the θ-grid if they are dissociated.

Finally, some remarks on other kinds of light verb constructions are in order. It is well-known that Japanese and Korean also have light verb constructions. Examples are provided below for Japanese.

(22) a. John-wa Mary-ni hanasi-o si-ta
John-Top Mary-to talk-Acc do-Past
'John talked to Mary.'

b. John-wa murabito-ni [ookami-ga kuru-to] keekoku-o si-ta
John-Top villager-to wolf-Nom come-Comp warn-Acc do-Past
'John warned the villagers that the wolf was coming.'

(Grimshaw & Mester 1988: 207)

However, it seems that these are of different nature from the Italian type discussed above and that the operation of re-association is not responsible for their formation. Firstly, there exists only one light verb, *suru* and there appears to be no correlation between the valency of the deverbal noun and the possibility of forming the construction. Thus, it is not the case that only nouns with two thematic arguments can combine with *suru*, as is evident from the above examples. (22a) contains the noun *hanasi* 'talk', which has two arguments, while in (22b), the noun *keekoku* 'warn' has three arguments. It appears that the light verb lacks an argument structure entirely and what may be licensed as its syntactic arguments is determined by the argument structure of the deverbal noun, as has been suggested by Grimshaw & Mester (1988), Saito & Hoshi (2000) and Samek-Lodovici (2003). Consequently, re-association, which makes reference to the argument structure of both the light verb and the deverbal noun, cannot be part of the process of deriving the construction.

4 Concluding Remarks

The aim of this dissertation was to provide a uniform account of the syntax of external possession in Japanese and Korean. I argued that the basis of the phenomenon is rooted in θ-theory. The thematic operation called 're-association' enables the external realisation of possessors regardless of the grammatical function of the possessee. The

contrast in the interpretation of an external possessor of a subject and that of an object was shown to follow from the interaction of the operation with other independent properties of language. Moreover, I examined further types of multiple nominative constructions in Japanese and demonstrated that such constructions and the phenomenon of external possession are independent of each other, as the former does not necessarily involve re-association.

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